REPORT RESUMES

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SUPPLY AND DEMAND FACTORS AFFECTING VOCATIONAL EDUCATION PLANNING, A METHODOLOGICAL STUDY IN SANTA CLARA COUNTY, CALIFORNIA.

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A PILOT STUDY WAS CONDUCTED TO DEVELOP A DESCRIPTIVE INVENTORY OF VOCATIONAL EDUCATION INSTRUCTORS AND TO EVALUATE PRELIMINARY DATA COLLECTION PROCEDURES FOR A REGIONAL OR NATIONAL AUDIT. A QUESTIONNAIRE, DISTRIBUTED TO ALL PUBLIC HIGH SCHOOL AND JUNIOR COLLEGE INSTRUCTORS IN 3,050 INSTITUTIONS, PRODUCED A 55.3 PERCENT RESPONSE RATE. SURVEY FINDINGS INCLUDED CROSS-TABULATIONS AND FREQUENCY DISTRIBUTIONS WITHIN AND BETWEEN SUCH VARIABLES AS (1) AGE, (2) SEX, (3) EMPLOYMENT EXPERIENCE OUTSIDE TEACHING, (4) EDUCATIONAL ATTAINMENT ON ENTRY INTO TEACHING, (5) MOBILITY OF LOCATION AND ASSIGNMENTS, (6) TEACHING EXPERIENCE IN INSTRUCTIONAL FIELDS, (7) RELATION OF ADDITIONAL EDUCATION TO PRESENT INSTRUCTIONAL FIELD, (8) PRIMARY AND SECONDARY TEACHING ASSIGNMENTS, AND (9) PRESENT EMPLOYMENT STATUS. IN ADDITION, BACKGROUND INFORMATION ON INSTRUCTORS IN PROFIT-MAKING SCHOOLS, OBTAINED THROUGH INTERVIEW AND VERIFIED THROUGH RECORDS CHECKS, WAS REPORTED. THE WORK EXPERIENCE OF PUBLIC SCHOOL INSTRUCTORS IN INDUSTRIAL ARTS SUGGESTED A RESOURCE FOR VOCATIONAL INSTRUCTORS, AND BACKGROUNDS OF PRIVATE SCHOOL INSTRUCTORS INDICATED THAT THEY COULD SATISFY MOST CREDENTIAL REQUIREMENTS FOR PUBLIC SCHOOL ASSIGNMENTS. ALTERNATIVE PROCEDURES FOR QUESTIONNAIRE SURVEY APPLICATIONS WERE PRESENTED, AND A MODEL FOR A SECOND-PHASE EFFORT TO PROVIDE CROSS-VALIDATIONS OF FINDINGS IN THE PILOT STUDY WAS INCLUDED. (GC)

STANFORD RESEARCH INSTITUTE
MENLO PARK, CALIFORNIA

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SUPPLY AND DEMAND FACTORS AFFECTING VOCATIONAL EDUCATION PLANNING,

A Methodological Study in Santa Clara County, California

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Edward A. Podesta

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Part 1

INTRODUCTION AND METHOD OF APPROACH

Chapter 1

INTRODUCTION

Background

A review of the literature, conference proceedings, and recent reports on manpower and education indicates that vocational education must diversify and expand if it is to respond adequately to the changing demands for skills and knowledge associated with rapid technological advancement. Rational planning for orderly expansion and diversification will not only require knowledge of the characteristics of effective vocational and technical education programs, but will also depend on the availability of reliable information about present educational resources and acceptable estimates of future ones. Primary among such resources are instructional staffs to develop and conduct the programs of vocational and technical instruction.

This study is directed to developing techniques for inventorying vocational teacher resources and for evaluating the adequacy of such resources in anticipation of a possible full-scale regional or national audit of the existing and potential supply of vocational teachers.

Objectives and Scope

The immediate objectives of the research were to develop, within a selected geographical area:

1. A description of present and potential vocational education teachers, including their background, qualifications, and sources of supply.

2. Estimates of future needs for change in vocational education programs.

3. Estimates of the influence of instructional personnel policies and practices on the size and quality of vocational teacher manpower resources.

It should be emphasized that the overall purpose of the above objectives was to develop and test methodologies for extending a comparable inventory on a regional or nationwide basis. Before conducting such a full-scale audit, however, it appeared reasonable to evaluate the appropriateness of various procedures for data

collection by testing them in an economical small sample. Thus, information on vocational education programs in the selected locale is presented only to indicate the variety of data that collection procedures may yield and should not be interpreted as an evaluation or assessment of current educational effort.

Chapter 2

METHOD OF APPROACH

Selection of the Sample Area

A county was believed to be an appropriate geographical and political unit to consider for a sample area for several reasons: county boundaries usually coincide with public school district boundaries; statistical data on a county base are usually available; county tax rolls list business enterprises; and the county governmental organization ordinarily includes agencies with overall responsibilities in areas of public education.

Ideally, the sample area would provide a range of conditions similar to those that might be encountered in a regional or nationwide study. Among the desired characteristics would be:

1. Different levels of urbanization.

2. A diverse economic base.

3. Public school system through secondary level, with a post-secondary community or junior college located nearby.

4. Proprietary schools with occupational training programs.

5. Local vocational education programs that draw some support from federal funds.

6. Organized labor activity in setting employment standards, apprenticeship programs, and training.

7. Some military installations located nearby.

For economic reasons, it was desirable to select a county which, while meeting the above criteria, would also be geographically convenient. Of the several counties within a short distance from the Institute, Santa Clara County, California, appeared most attractive for the purposes of the study and was selected as the sample area.

The county is located 30 miles south of San Francisco and extends southward for some 60 miles, taking in all of the Santa Clara Valley and adjacent foothill areas. Most of its 900,000-population is located in the urban northern half of the county, which includes

San Jose (the county seat and largest city), as well as 13 of the remaining 15 incorporated areas of the county.

The introduction and expansion of electronics, aerospace, and research and development activities has transformed the economy of the area during the past decade from agricultural to technological industry. The county still maintains a substantial food processing industry with heavy seasonal demands for short term labor; however, this activity no longer dominates the economy. Today, all but one of the year-round major employers are concerned with "space age" production.

Santa Clara County has three universities with an estimated enrollment (March 1965) of 27,000, four junior colleges with about 11,500 students, and 42 public high schools enrolling approximately 54,000. (3) In addition, there are 38 proprietary schools offering resident instruction in a variety of occupationally oriented programs.

Identification of Vocational Programs

For the purposes of this study, the definition of vocational education used by the President's Panel of Consultants on Vocational Education was adopted:

> . . . vocational education refers to that part of a student's instruction intended specifically to fit the student for work. . . . the term "vocational education" (refers) to all formal instruction for both youth and adults, at the high school, post high school, and out-of-school levels, which prepares individuals for initial entrance into and advancement within an occupation or group of related occupations. . . . "vocational education" does not refer to instruction leading directly to a baccalaureate or professional degree. . . . "technical education" . . . is considered to be a part of the natural continuum of vocational education (applying to) a phase of vocational education having certain unique characteristics, usually requiring more rigorous science and mathematics background and more exacting skills. (4)

Public School Programs

In 1962, the California State Department of Education initiated biennial publication of the Directory of Occupation Centered Curriculums in California Junior Colleges and Schools for Adults as a resource aid to school counselors. This publication classifies vocational programs by occupational curriculum, job title, and school. It also presents such information as the number of semesters in the program, the type of certificate or degree awarded, whether the program is open to men, women, or both, and whether it is offered in day and/or evening classes. Guidance material covers employment prospects, training and other qualifications, and additional references for each job title.

The 1964 edition provided baseline data on programs offered in Santa Clara County public schools. This information was updated through use of current school catalogs and schedules of classes, which were obtained from the respective schools. It should be mentioned that development of a current program inventory on the basis of catalog listings alone may prove misleading. Catalog publication deadlines are usually well in advance of the school year, and thus some course additions or deletions may not be reflected in the catalog. Changes that occur after publication of the catalog will be detected if the class listings in the schedule are checked against the catalog. This procedure was followed and the list of programs was then verified with school administrators.

Proprietary School Programs

Identification of vocational programs in proprietary schools posed a more difficult problem. As a first step, an inventory of proprietary schools in the county was required. Although such institutions are licensed locally as commercial enterprises, the number of licensing offices and the arrangement of license files within these offices would require extensive effort to develop a school list from this source.

Information on proprietary school activities is available at the state level, since the state exercises considerable control over their operations. However, this control is not vested in any single state agency; for example, cosmetology schools are the direct concern of the State Board of Cosmetology, while the Board of Nursing Education and Nurse Registration is concerned with nursing education programs in all types of institutions. Aside from such special-interest, school-agency arrangements, the majority of the proprietary schools are the concern of the Bureau of Readjustment Education in the State Department of Education. Although this agency attempts to maintain a current audit of those schools under its jurisdiction, the transitory nature of many proprietary school operations makes the task extremely difficult, and thus there is no assurance that its current inventory reflects an accurate tabulation of all active schools. While outdated and incomplete, a directory of schools published by the bureau in 1965 (1) proved valuable as a guide and checklist for use in the inventory procedure described below.

The primary information sources used in the development of the proprietary school inventory were the local telephone and business directories and the classified advertisement sections of newpapers with local circulation. School listings in the telephone and business directories were checked to develop a basic roster that was augmented and updated with information on educational offerings obtained through a daily screening of the classified advertisements in the local newspapers.

The resultant roster of proprietary schools was then compared with listings at cognizant state agencies. On the basis of information provided by these agencies, the list was refined to eliminate those institutions offering only avocational programs as well as those that did not provide vocational training in the local area. This latter group included "schools" that operated solely as agents for correspondence programs or that recruited prospective students for resident vocational programs outside the county.

The gathering of information on proprietary school vocational programs proceeded concurrently with the development of the school inventory. As it was verified that schools were offering vocational programs, letters were sent to school directors to acquaint them with the scope and objectives of the study and to enlist their cooperation through participation in a personal interview. All individuals indicated their willingness to cooperate, and several volunteered background information on their schools in anticipation of the interview requirements.

Initially, it had been planned that the interview would serve to outline the information requirements and that data collection forms would be left for completion and submission by school personnel. However, the variety of operating conditions encountered in the first proprietary schools to be visited quickly led to doubts that a standardized data collection form of reasonable size could be devised that would be adaptable to all situations. Accordingly, information on proprietary school programs, instructional staff, operating procedures, student costs, and enrollments was developed through personal interviews with the school manager, director, or proprietor. Copies of promotional literature, catalogs, course outlines, and student contracts were obtained when available and supplemented the interview results. This information was subsequently compared with that presented to the cognizant state agency by the school in its application for approval. (Permission had previously been granted for access to these privileged information files for study purposes.)

Nonschool Agency Programs

It was apparent early in the project that the support and cooperation of the local public school authorities would have to be enlisted, since the principal vocational education activity in the county is concentrated in the public school system. A series of orientation meetings with school officials not only resulted in commitments for support, but also provided information and suggestions as to individuals and organizations involved with vocational education programs outside the school framework, e.g., the agencies associated with Manpower Development and Training Act (MDTA) programs and a number of large firms in the county that conducted employee training programs.

Interviews were arranged with directors of MDTA programs at the local offices of the California State Employment Service and the Youth Opportunity Center. These meetings produced detailed information on current educational programs, including such matters as course objectives, indicators determining program needs, and student recruitment. Lists of past, present, and proposed programs were developed, together with information on programs that had been considered but for various reasons had never been initiated.

Details on programs of training in industry were developed through correspondence and interviews with personnel and education program directors when responses to initial letter inquiries to the firms indicated the existence of employer-sponsored courses.

Instructional Personnel Inventory

Interviews were not restricted to program and course identification in the development of information on proprietary and non-school agency programs. Although broadly structured and informally conducted, these interviews also sought to elicit other information required for the study by discussion of school and program operations. Proprietary school, business, and other agency officials were extremely cooperative when approached on a professional basis and assured of the confidentiality of their statements. They were candid in their replies to questions on such matters as sources and availability of instructors, background and qualifications of instructional staff, and turnover rates of staff personnel. In the case of the proprietary schools, access to the files in the Bureau of Readjustment Education provided an opportunity to verify the information on instructional staff received in the interviews.

Discussions with representatives of bureaus of the State Department of Education suggested that background information on vocational instructors in public schools might be available in various periodic reports, program funding applications, and similar reports that are submitted by schools or school districts. Accordingly, permission was requested and granted for access to these files to determine the applicability of the information to the research objectives of the study. While this effort did produce details of events leading to the approval and initiation of funded programs, the reports and documents only covered funded programs and data on instructional personnel were either incomplete or outdated insofar as the purposes of this study were concerned.

Attention was then directed to the development of a self-administered questionnaire to obtain information on the educational background, teaching experience and status, and employment experience of instructors in public high schools and junior colleges in the county. A survey of recent literature and discussions with educators led to the conclusion that the questionnaire would best serve the objectives of the study if it were directed to all instructors instead of solely to vocational subjects instructors. This distribution would eliminate the problem of before-the-fact definition of "vocational subjects instructor" and would permit identification on an empirical basis from the collected data. It would also permit an assessment of the degree to which general education subjects instructors might, on the basis of their employment experience, represent a resource for innovative, vocationally oriented programs, such as the pre-tech concept currently being introduced in a number of schools throughout the country.

School district officials having expressed a desire to cooperate in the study effort were informed of the contemplated survey, and they agreed to arrange for questionnaire delivery to the instructors through normal school distribution procedures. Each questionnaire was to include an explanatory cover letter requesting the teacher's cooperation in the survey and a stamped, addressed envelope for individual return of completed questionnaires.

The initial version of the questionnaire and explanatory cover letter was first reviewed within the Institute and then pretested with nine instructors at three high schools. Five of these instructors taught industrial arts or business education courses and four taught general academic subjects. The pretests were conducted individually by an Institute representative. The subject was told to complete the questionnaire to the best of his ability and to note any problem items but to reserve questions of clarification until after the pretest. The Institute representative observed the teacher for indications of difficulty in answering questions and also timed the exercise.

Following this pretest, the questionnaire and cover letter were revised and the new version was pretested in the same manner, this time with eight instructors at a junior college. Their comments and observations were incorporated in the third version, which was forwarded to the Office of Education for clearance and approval. Following receipt of the approval document, the questionnaire was precoded insofar as possible, printed, and delivered to school district administrative offices for further distribution to individual schools. A copy of the questionnaire and cover letter is shown in Appendix A.

Personnel Policies and Practices

The background information questionnaire included a number of questions concerning residence, tenure, credentials, and teaching employment status, which were designed to serve as indicators of sources of vocational education subjects teachers, as well as to provide descriptive information. In some cases, catalog staff listings included biographical detail, such as employment experience and affiliation, for teaching faculty who had been identified as teachers in vocational programs through analysis of the schedule of classes.

However, the question of how such individuals first came to the attention of school officials and to what degree they satisfied the qualification requirements was discussed in personal interviews with school administrators responsible for vocational education programs. As background information for these interviews, detailed discussions had been held with state education officials directly concerned with the credential requirements for vocational subjects instructors; copies of applicable sections of the State Education Code had been obtained and studied in detail; and the regional office that processes credential applicants had been visited to observe procedures at first hand.

Planning for Vocational Education Programs

The planning background information available in the files of supporting documents for program funding requests was mentioned earlier. In all interviews with school administrators--both public and private--questions were raised concerning how the concept of a program requirement was originally developed. When answers were general, references were made to specific programs to develop detailed responses and to determine whether there was any consistency in the pattern of program development. Efforts were made to determine what criteria governed, and to what degree, in the decision to initiate or reject a contemplated program of instruction. Administrators were asked to assess the emphasis given to instructor availability in such decisions, as well as in decisions to amend or curtail ongoing programs.

Methods Of Analysis

In cataloging the array of public school vocational programs in the county, efforts were restricted to the junior colleges and selected high school districts where published materials describing course offerings were readily available. Curriculum outlines in these publications provided sufficient information to make general decisions regarding program comparability in cases where course titles or program objectives varied. Attention was also directed to program length and whether the terminal programs led to diploma, certificate, or associate degrees on completion.

Information on proprietary school and other agency instructional programs was classified according to course objectives, time length, student clientele and, where applicable, course cost to the student. Programs were compared with public school offerings to determine whether there were any instructional areas exclusively in the public or private school domain and to determine which programs were common to both public and private schools. Common programs were compared on the basis of admission requirements, completion criteria, general content, and frequency of offering.

Background details on instructional personnel of proprietary schools, such as age, educational attainment, teaching experience, employment experience in the area of instruction, and current employment status, were compared with announced credential criteria for instructors in public schools, as well as with existing policies for public school teaching assignments, to determine the degree to which this group of individuals might represent a potential source of public school program instructors.

Personal inventory questionnaire returns from public school teachers were logged in when received and then edited. Omitted items were completed in those instances when other answers could be used to develop the missing information. Some answers were corrected when responses to related questions revealed an obvious inconsistency. Several items were deleted because answers indicated that the questions had been misinterpreted. These and other problems that arose during the editing phase are covered in detail in the discussion of questionnaire survey feasibility.

After editing, the answers were coded and transferred to punch cards, which were then processed, using existing programs, with the Model 30 IBM 360 computer. The resultant frequency distributions and cross-tabulations permitted analysis within and between a wide range of variables descriptive of the respondent teachers.

Part 2

RESULTS

Chapter 3

VOCATIONAL PROGRAMS IN SANTA CLARA COUNTY

Public High Schools

Identification of vocational education programs at the high school level poses a problem because of the existence of courses whose titles imply vocational preparation objectives but which are actually integral parts of the general education program, principally various courses in business education and industrial arts. The problem is further complicated by the fact that, despite the underlying educational philosophy, some students regard these courses as preparation for job entry and, in fact, do seek and obtain employment on the basis of skills acquired in such classes.

In excluding certain business education and industrial arts offerings from the listings that follow, there is no implication that such courses do not represent a potential for vocational preparation, albeit incomplete or imperfect. However, one might also make a similar case for including other general education subjects, such as the laboratory sciences, on the basis that some students obtain related employment utilizing techniques learned in class. Therefore, listings have been restricted to programs specifically designed to prepare youth for entering employment upon graduation from high school. A summary of the vocational education programs offered in Santa Clara County high schools is shown below.

Agriculture

- Agriculture, general
- Farm mechanics
- Horticulture and nursery operation

Applied and Graphic Arts

- Printing

Business and Commerce

- Data processing
- Distributive education
- General office occupations

Business and Commerce (cont'd.)

- Medical secretary
- Technical typist

Trade and Industrial

- Aerospace technology
- Aircraft mechanics
- Auto body repair
- Auto mechanics
- Carpentry
- Electricity, general
- Electricity, industrial
- Electronics
- Machine shop
- Mill cabinet
- Painting and decorating
- Plumbing
- Radio and television repair
- Sheet metal
- Welding

Work Experience

- Diversified occupations
- Service station operation

The list is comprehensive, but the availability of such offerings in county high schools varies widely. Programs in the four high schools and the associated vocational center of the San Jose Unified School District include 22 of the 26 vocational instructional areas listed above, but there are a number of high schools in which vocational programs are limited to the general office occupations area.

Public Junior Colleges

While the junior college is commonly thought of as providing the first two years of a four-year college education, its role in the California system includes an equal commitment to occupational-vocational programs. The four junior colleges in Santa Clara County have developed their occupational programs to provide associate of arts degrees* in 50 vocationally oriented curriculum areas; five are common to all schools, two are common to three schools, six are common to two schools and the remainder are available at one school only. However, interdistrict agreements permit a student who is interested in and qualified to enter a program not offered at his local junior college to attend the college offering the desired course. The distribution of these occupationally oriented programs is shown in Table 1.

As Table 1 indicates, Foothill College and San Jose City College hold dominant positions in vocational education at the junior college level. Both West Valley and Gavilan colleges serve newly formed junior college districts and have only been in operation for two years. These two colleges are located at temporary campuses with limited facilities that restrict their potential for vocational programs. Table 1 also shows that programs for technician training tend to be concentrated at Foothill College, while almost all of the trade courses are at San Jose City College.

Proprietary Schools

Proprietary schools in the county offer programs in all but one of the major fields covered by the junior colleges. However, these programs do not approach the variety of curriculums available in the junior colleges but tend to concentrate in the commercial, personal services, and trade areas. The breakdown below shows the distribution of schools by occupational area:

Occupational Area	Number of Schools
Business and commercial	6
Health services	1
Real estate	6
Cosmetology	9
Barber	1
Trade and technical	8
Miscellaneous	7
Correspondence	1
Total	39

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* Some associate of arts programs are also available in an abridged version that retains the vocational subjects of the longer course. A certificate of proficiency is awarded to students completing the abridged program.

Table 1

DISTRIBUTION OF OCCUPATIONAL PROGRAMS IN SANTA CLARA COUNTY JUNIOR COLLEGES
Spring Semester 1966

Curriculum Area	Foothill College	Gavilan College	San Jose City College	West Valley College
Applied Arts				
Photography	X			
Technical illustration	X			
Technical publications	X			
Business				
Accounting	X	X	X	X
Data processing	X		X	
General insurance			X	
Insurance adjusting	X			
Marketing and sales			X	X
Marketing management	X			
Purchasing	X			
Real estate	X	X	X	X
Secretarial	X	X	X	X
Transportation	X			
Technical and Industrial				
Auto body repairing			X	
Automotive technology			X	
Aviation mechanics		X		
Cabinet and millwork			X	
Carpentry			X	
Civil engineering technology		X		X
Data processing, scientific	X			
Drafting technology	X	X	X	X
Electrical wiring			X	
Electronics technology	X		X	X
Electronics technology, magnetic tape recorders	X			
Electronics technology, microwave	X			
Electronics technology, solid state	X			
Electro-photo-optics	X			
Industrial technology			X	
Machinist technology			X	
Painting and decorating			X	
Plumbing			X	
Printing			X	
Sheet metal			X	
Supervision, industrial	X			
Technical writing and editing	X			
Tool design	X			
Vacuum technology			X	
Welding technology			X	
Health Services				
Dental assisting	X		X	
Dental hygiene	X			
Inhalation therapy	X			
Medical assisting	X		X	X
Nursing (RN)	X		X	
X-ray technology	X			
Public and Personal				
Cosmetology		X	X	
Fire science			X	
Food services				X
Library assisting		X		
Police science	X	X	X	X
Nursery school training	X			

The trade and technical group includes schools with programs in radio and television repair, electronic assembly, offset printing, welding, auto mechanics, electronic technology, commercial driving, and drafting. Schools in the miscellaneous group offer programs for such diverse occupations as professional models, bartenders, cocktail waitresses, or masseurs. The health services school gives instruction for medical or dental assistants, and the correspondence school teaches piano tuning. Additional detail on programs and other aspects of proprietary school activities is contained in the paper, An Exploratory Survey of Proprietary Vocational Schools, which was prepared during this study and is included as Appendix B.

Nonschool Agencies

Although almost all of the current MDTA training programs in Santa Clara County are conducted at public school facilities, the responsibility for determining program requirements and initiating funding requests rests with local representatives of the State Department of Employment. Therefore, such programs are reported here as nonschool agency activities rather than with the schools at which they are presented. Training programs for unemployed adults and youth in progress during the spring and summer of 1966 are shown in Table 2. In addition, an MDTA upgrading program that provided sheet metal workers with training in the applications of thermosetting plastics was being offered.

Many of the programs listed in Table 2 represent offerings that were being repeated for the second or third time, particularly in the health services occupational areas where demands for trained personnel are high. Other programs, conducted recently, but not scheduled at the time of this survey, include training courses for groundskeeper, auto service station attendant, janitor-porter, maid, keypunch operator, technical typist, and technical illustrator.

Programs offered in industry were found to be primarily concerned with familiarizing employees with the functions, operations, applications, and production of the firm's products, with providing opportunities for individual personal development, and with developing managerial and supervisorial skills. The scope of this educational activity in local industry varies considerably, even among firms whose operations are in similar industrial areas, and is extremely difficult to assess. Some firms maintain substantial programs on a continuing basis; for example, one organization--the largest single employer of technical personnel in the county--published a 45-page catalog of "in-house" training opportunities for employees that listed over 150 courses. On the other hand, three firms--each employing a substantial number of technical personnel--reported that organized courses were currently restricted to management and supervisory programs. Additional information developed through interviews revealed that other instruction was being carried out under the

Table 2

MDTA TRAINING PROGRAMS FOR UNEMPLOYED ADULTS AND YOUTH

Santa Clara County
Summer 1966

Program	Location and Student Classification*	
	San Jose	Palo Alto
Home health aide	Adult	
Hospital orderly	Adult/Youth	
Licensed vocational nurse	Adult	Adult
Nurse's aide	Adult	Adult
Registered nurse refresher	Adult	
Clerk-typist	Youth	Adult/Youth
Medical office clerk		Adult/Youth
Secretary-stenographer		Adult/Youth
Duplicating machine operator		Adult/Youth
Office machine repairman	Youth	
Retail sales clerk		Adult/Youth

---

* Age criteria govern student classification; an adult is 22 years of age or older, and a youth is 17 through 21 years of age.

Source: Stanford Research Institute.

general classification of "on-the-job training;" however, it usually did not follow a formal sequence, and its goals were difficult to define with any degree of precision. Accordingly, attempts to develop a comprehensive enumeration of training programs in industry were unsuccessful.†

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† Similar difficulties were experienced in a recent Institute study directed toward investigation of training in industry. It was found that problems of goal and program definition, as well as personnel accounting, make it extremely difficult to derive quantitative information that would support reliable conclusions concerning the scope and extent of training activities within industry. (2)

Chapter 4

INSTRUCTIONAL PERSONNEL INVENTORY

Public High Schools and Junior Colleges

Questionnaires were distributed to instructors through school administration channels during the last week of May. By the end of June, nearly all of those teachers who participated had returned their completed forms, and the survey was closed on July 15, 1966. The tabulation of response rates is shown below:

	Distribution	Returns	Response Rate
High schools	2,121	1,223	57.7%
Junior colleges	929	465	50.0
Total	3,050	1,688	55.3

Unfortunately, the lack of detailed information on various background characteristics of the surveyed population prevents testing the degree to which the respondent group represents an acceptable sample of the total population of teachers in the county public secondary and post-secondary schools. Information in class schedules, school catalogs, and instructor rosters did permit comparisons on the basis of sex and principal area of instruction at each school level. The distribution of respondents by sex was found to approximate total population distribution quite closely, particularly at the high school level, as shown below.

	Total Population		Respondent Sample	
	Male	Female	Male	Female
High school teachers	63.7%	36.3%	61.1%	38.9%
Junior college teachers	80.3	19.7	75.5	24.5

The comparison on the basis of principal area of instruction was equally close at the high school level and somewhat less precise at the junior college level. In the comparison shown below, the vocational category at the high school level includes business education, industrial arts, and agriculture, as well as vocational programs.

	Total Population		Respondent Sample	
	Academic	Vocational	Academic	Vocational
High school teachers	87.3%	12.7%	85.4%	14.6%
Junior college teachers	54.1	45.9	65.4	34.6

However, several characteristics of the respondent population preclude treatment of this group as a representative sample of the total. For example, there were no respondent teachers identified with high school vocational programs per se and none from the graphic arts instructional area, which is available at both the high school and junior college level. Accordingly, the following presentation of substantive information is descriptive of the respondent group alone and may or may not accurately reflect characteristics of the total population. The survey results do, however, provide empirical bases for the development of hypotheses that may merit further exploration. The survey results also indicate the types of data that can be acquired through application of this methodology and the kinds of relationships that can be derived from such analysis. The detailed tabulations from which the following summary data are drawn are contained in Appendix C.

Distribution by Age, Sex, and School Level

Over 26 percent of the high school instructors in the respondent sample were in the 25-29 year age group, the median for this teacher category. At the junior college level, the median age group of 35-39 years included 24.1 percent of the instructors. Female instructors outnumbered the males by three to one in the under-25-years age group, but from this point on, the male instructors dominated the field.

Only 1.1 percent of the 1,688 respondents were 60 years of age or older, and 80 percent were under 45 years of age. A further breakdown by school level shows 82 percent of the high school teachers and 75.1 percent of the junior college instructors as being under 45 years of age.*

Distribution by Primary Area of Instruction and School Level

Since most of the descriptions of results include references to "primary area of instruction," the following brief explanation is given to establish the meaning of the term in this study.

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* See Table C-1, Appendix C for detailed tabulation.

Teachers were asked in the questionnaire to indicate the instructional field that accounted for all or most of their current teaching load and to identify the subjects being taught in that field. The responses were classified initially on the basis of subjects taught as either general or vocational education. The former includes the arts, languages, mathematics, sciences, home economics, physical education, and other subject areas usually associated with an academic curriculum. The latter has been further broken down into seven broad instructional areas: agriculture, graphic arts, business and office education, health services occupational programs, industrial arts, trade and technical vocational programs, and public and personal services programs. The courses included in these areas of instruction are listed in Appendix C.*

Certain omissions in primary area of instruction data also require explanation. No tabulations appear for health services instructional area at the high school level, industrial arts at the junior college level, and public and personal services at the high school level since there were no programs offered at the time of this survey. Programs were offered in agriculture at the junior college level, trade and technical subjects at the high school level, and graphic arts at both levels; however, there were no respondents from these instructional areas.

Distribution of survey respondents by primary area of instruction, school level, and sex is shown below.†

Primary Area of Instruction	School Level and Sex				
	High School		Junior College		
	M	F	M	F	Total
General education	620	424	223	81	1,348
Agriculture	6	0	0	0	6
Business and office education	47	50	52	13	162
Health services	--	--	3	19	22
Industrial arts	71	0	--	--	71
Trade and technical	0	0	66	0	66
Public and personal services	--	--	7	1	8
Total	744	474	351	114	1,683‡

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* See note to Table C-2, Appendix C.

† See Table C-2, Appendix C.

‡ Five respondents, all at the high school level, did not indicate their primary area of instruction.

Distribution by Primary Area of Instruction, Teaching Status, and School Level

Respondents were asked to indicate whether their employment status was permanent, probationary, or substitute and whether they taught full- or part-time. There were only nine substitute teachers among the respondents; of the remainder, 1,180 or approximately 70 percent had achieved permanent status. The following comparison shows that, with the exception of the junior college level general education subjects instructors, the ratio between permanent and probationary status of respondents is approximately the same for all instructional areas and school levels.

	Permanent	Probationary
General Education		
High school	72.5%	27.5%
Junior college	58.1	41.9
Vocational/Industrial Arts		
High school	76.4	23.6
Junior college	73.1	26.9

Most of the respondents were full-time instructors, only 213 or 12.3 percent of the total indicating a part-time assignment. These part-time teachers were distributed in fairly similar proportions between the permanent and probationary groups; 10.9 percent of the permanent teachers and 15.9 percent of the probationary instructors were part-time. However, the proportion of part-time instructors in vocational education subjects was considerably higher than the proportion in general education subjects, as shown below.

Instructors	Full-time	Part-time
General education subjects	89.6%	10.4%
Vocational education subjects	76.7	23.3

Specific areas of instruction within the vocational field that included a substantial proportion of part-time instructors were at the junior college level: business and office education, with 41.5 percent part-time instructors; health services, with 22.7 percent; and trade and technical courses, with 68.2 percent part-time.*

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* See Table C-3, Appendix C for detail.

Educational Background of Instructors

Analysis of completed questionnaires provided considerable information on the educational attainment of respondents prior to and after entering the teaching profession.

Educational attainment on initial entry into teaching was reported in terms of years of school completed at the time of the respondent's first teaching assignment. Over 97 percent of the instructors currently teaching in high schools had completed college when they first entered teaching, and 64.6 percent had finished one or more years beyond the baccalaureate. No respondent from the high schools had less than a high school education when he first entered teaching.

The range of educational attainment on entering teaching, as reported by junior college instructors, extended from the 10th grade to six years of graduate school; however, all but 4.5 percent had completed some college, and 86.5 percent had a baccalaureate or higher degree when they began to teach.

This background information on educational attainment is summarized below by present area and level of instruction.*

	Educational Attainment on Entry into Teaching†				
		College (years)		Graduate School (years)	
Present Area and Level of Instruction	High School Only	1-3	4	1-3	Over 3
General education					
High school	--%	1.6%	29.0%	66.9%	1.2%
Junior college	0.3	2.0	27.0	66.4	2.9
Agriculture					
High school	--	--	16.7	83.3	--
Business and office					
High school	--	1.0	47.4	49.5	--
Junior college	1.5	1.5	33.8	55.4	6.1
Health services					
Junior college	13.6	27.2	31.8	27.2	--
Industrial arts					
High school	2.8	1.4	62.0	32.4	--
Trade and technical					
Junior college	22.7	33.3	19.7	21.2	3.0
Public and personal					
Junior college	12.5	25.0	--	50.0	12.5

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* See Table C-7, Appendix C for detailed tabulation.

† Percentage totals may not add to 100 percent due to rounding and omission of "no answer" responses.

Attention was also directed to the educational advancement of teachers after their entry into teaching. Teachers were asked to indicate the number of semester credit hours of study they had completed since entering teaching and to estimate the proportion of this study that was related to their present primary area of instruction.

Only 114 or 8.5 percent of the 1,335 general education subjects instructors who answered this question reported that they had taken no additional classes since entering teaching. The results were about the same for the industrial arts and vocational subjects instructors; 13 percent indicated no additional study since they had started teaching.

Approximately 70 percent of the general education subjects instructors estimated that more than half of their additional study was related to their primary area of instruction, and this estimate held for those who had taken over 30 semester credit hours of additional study, as well as for those who had taken less. This relationship, developed from Appendix Table C-8, is shown below:

General Education Subjects Instructors

Proportion of Study Related to Present Area of Instruction	Semester Credit Hours of Study 1-30	Semester Credit Hours of Study Over 30
One-half or less	32.1%	28.3%
Over one-half	67.9	71.7
Total	100.0%	100.0%
	(N = 483)	(N = 731)

As in the case of general education subjects instructors, the majority of vocational and industrial arts teachers also reported that over half of their additional study was related to their primary area of instruction.* However, the proportion of teachers so reporting was not as predominant as in the case of general education subjects instructors, 64.8 percent as compared with 70.2 percent. Furthermore, as the tabulation on the following page shows, the proportion of vocational and industrial arts instructors reporting over half of their additional study as related decreases slightly as the number of credit hours of study increases; the opposite trend occurs in the case of the general education subjects instructors.

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* See Table C-9, Appendix C for detailed frequency distributions.

Vocational and Industrial Arts Instructors

Proportion of Study Related to Present Area of Instruction	Semester Credit Hours of Study	
	1-30	Over 30
One-half or less	32.0%	37.7%
Over one-half	68.0	62.3
Total	100.0%	100.0%
	(N = 125)	(N = 162)

Academic degrees earned represented another aspect of educational attainment that was investigated in the questionnaire survey. Teachers were asked to indicate their highest degree, and the results were tabulated according to primary area of instruction and school level. As one would expect from the years-of-school-completed data discussed earlier, a masters degree was reported by 54.2 percent of the respondents, a bachelors by 40.2 percent, and only 2.0 percent of the respondents did not hold an academic degree or certificate. The following tabulation, derived from Appendix Table C-10, summarizes details on the distribution of degree-holding respondents by school level and area of instruction.

Present Area and Level of Instruction	Highest Degree Held by Respondents*						
	None	Certificate	Associate	Bachelor	Master	Doctor	Other
General education							
High school	--%	--%	--%	51.7%	46.9%	0.4%	0.1%
Junior college	--	--	--	5.6	87.5	6.3	0.3
Agriculture							
High school	--	--	--	33.3	66.7	--	--
Business and office							
High school	--	--	--	60.8	38.1		
Junior college	1.5	--	--	15.4	72.3	4.6	4.6
Health services							
Junior college	31.8	4.5	4.5	4.5	54.5	--	--
Industrial arts							
High school	1.4	--	--	47.9	50.7	--	--
Trade and technical							
Junior college	36.4	4.5	7.6	16.7	30.3	3.0	1.5
Public and personal							
Junior college	12.5	25.0	--	25.0	25.0	--	12.5

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* Percentage totals may not add to 100 percent due to rounding and omission of "no answer" responses.

A comparison of the preceding tabulation with that of educational attainment on entry to teaching shows which of the teachers who began their careers with less than a college education have since advanced to degree status. Comparison of the two tabulations also reveals that for high school instructors the years of school completed is not an accurate indicator of advanced degrees held. Despite the sizable proportion of high school instructors who had completed a year or more of graduate school when they began teaching, there were generally fewer instructors with degrees beyond the baccalaureate than one would anticipate on the basis of educational attainment.

Teaching Experience of Respondents

No marked difference was noted when the general education subjects instructor group was compared to the vocational/industrial arts teacher group on the basis of overall teaching experience, as shown below.*

Years of Teaching	General Education Instructors	Vocational Industrial Arts Instructors
0-4	34.2%	39.6%
5-9	31.5	30.8
10-14	16.3	15.4
15-19	10.8	9.7
20-24	3.9	2.1
25-29	1.9	0.9
30+	1.3	1.5

Tabulation of answers to the question, "What was the level at which you first taught?" indicated that 86.2 percent of the respondents currently teaching in high schools had begun their careers at this level, but only 32.3 percent of the junior college instructors had started teaching at a junior college, and 38.9 percent had first taught at the high school level.

The initial experience pattern of teachers with current primary instruction assignments in one of the six areas of the vocational/industrial arts field varies from subject to subject.† Almost all of the agriculture, industrial arts, and business and office education instructors now at the high school level began their teaching careers in a secondary school as shown on the following page.

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* Derived from Tables C-11 through C-17, Appendix C.

† See Table C-4, Appendix C.

Present Primary Instruction Area	Level of First Teaching Assignment Elementary School	Secondary School	Junior College	Business College
Agriculture	--%	100.0%	--%	--%
Business and office	4.1	92.8	1.0	2.1
Industrial arts	7.0	88.7	--	4.2

However, the junior college instructors in vocational subject areas reported a wide variety of initial teaching assignments.

Present Primary Instruction Area	Level of First Teaching Assignment Elementary School	Secondary School	Junior College	Business College	Trade School	Other
Business and office	3.1%	40.0%	35.4%	3.1%	3.1%	15.4%
Health services	--	4.5	54.5	--	13.6	27.3
Trade and technical	--	13.6	53.0	--	10.6	22.8
Public and personal services	--	--	75.0	--	25.0	--

The "trade school" category above includes all of the proprietary schools with occupationally oriented programs, such as cosmetology, medical and dental assisting, and real estate sales. Adult education, military instruction, and training programs in industry are included in the "other" category.

Over three-quarters of the respondent instructors reported that their initial teaching assignment (exclusive of student teaching) had been in a California school, and 51.5 percent had begun teaching in Santa Clara County. Although those who had begun teaching outside California represented every region of the country, the largest group came from west of the Mississippi River, and only a few reported initial assignments in the South or New England. A summary of the distribution of respondents in terms of the location of their initial teaching assignments is shown on the following page.*

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* See Table C-5, Appendix C for detail.

Location of First Assignment	Present Primary Area of Instruction and Level			
	General Education		Vocational/Industrial Arts	
	HS	JC	HS	JC
Santa Clara County	53.5%	33.6%	59.8%	64.6%
Elsewhere in California	24.5	34.0	25.9	16.1
Other states	22.0	32.4	14.3	19.3
Total	100.0%	100.0%	100.0%	100.0%

Respondents also reported whether they had taught elsewhere prior to their present assignment and, if so, they indicated the location of the school. The results show that 591 teachers, 35 percent of the respondent total, had never taught elsewhere; thus, 68 percent of those instructors who began teaching in Santa Clara County had remained in the same school. Some 44 percent of those instructors reporting another school assignment prior to their present one listed a school that was also located within the county. A summary of results is presented below.*

Location of Prior School	Present Primary Area of Instruction and Level			
	General Education		Vocational/Industrial Arts	
	HS	JC	HS	JC
Santa Clara County	30.0%	31.6%	22.4%	21.7%
Elsewhere in California	20.0	28.0	23.6	17.4
Other states	13.2	22.6	11.5	11.8
Subtotal	63.2%	82.2%	57.5%	50.9%
Did not teach elsewhere	36.8	17.8	42.5	49.1
Total	100.0%	100.0%	100.0%	100.0%

Respondents reported teaching experience in their present primary area of instruction, and this information was compared with their total teaching experience. Appendix Tables C-11 through C-17 show this relation in detail for general education subjects instructors and for instructors in each of the six areas in the vocational/industrial arts field at both the high school and junior college level. The following tabulation summarizes the distribution of respondents according to years of teaching experience in their present primary area of instruction.

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* See Table C-6, Appendix C for detail.

Years of Teaching in Present Field	General Education Subjects Instructors	Vocational/Industrial Arts Instructors
0-4	41.9%	43.7%
5-9	29.9	30.7
10-14	13.2	15.4
15-19	6.1	7.2
20-24	2.2	1.5
25-29	1.3	0.6
30+	0.4	0.9
Total	100.0%	100.0%

A comparison of this tabulation with the total teaching experience tabulation offers a broad indication of the proportion of teachers who have taught in fields other than their present primary area of instruction. For example, the percentage of teachers with zero to four years experience in their present primary field exceeds the percentage of teachers with zero to four years total experience and thus includes some instructors with more than this minimum total experience. The precise distribution is detailed for each subject area in the appendix tables mentioned above.

These appendix tables also provided the data for the following tabulation, which shows the percentage of respondents by length of teaching experience who have always taught in their present primary area of instruction.

Total Teaching Experience (years)	Percentage of Respondents with All Teaching Experience in Present Primary Area of Instruction	
	General Education Subjects Teachers	Vocational/Industrial Arts Teachers
0-4	100.0%	100.0%
5-9	79.9	90.0
10-14	65.2	84.3
15-19	56.0	71.0
20-24	64.4	57.1
25-29	60.0	66.7
30+	31.3	60.0

Instructors were also asked whether they taught subjects in a second area of instruction and, if so, they were asked to list the teaching field and subjects. Fifteen percent of the respondents reported instruction assignments in two teaching fields. Approximately 85 percent of these were within the general education subjects area, covering cases such as the mathematics instructor who also teaches physics, the physical education teacher who is in charge of driver education, etc. The majority of the second assignments outside general education were in the business and office education area and were all reported by respondents with primary areas of instruction in general education subjects. The number of respondents reporting assignments in two teaching fields, by school level, is shown below.*

	High School	Junior College
Respondents with two teaching assignments	210 (17.2%)	44 (9.5%)

Teaching Credentials Held by Respondents

The variety and number of valid credentials reported by respondents is substantial, amounting to 2,320 credentials distributed over more than 20 specific types. Questionnaire returns showed that 30 percent of the respondents currently held more than one valid credential, and five respondents reported holding five different credentials at the time of the survey. These credentials fall into four broad categories: teaching, both general and special; administration; supervision; and counseling and guidance.

Most of the credentials reported by respondents were teaching credentials, accounting for 87.8 percent of the total listed. Only 6.2 percent of the teaching credentials were vocational or designated subjects credentials, and all but 17 of the 126 total were held by instructors in the vocational/industrial arts primary instruction area.

A summary of the number and general type of credentials reported by teachers in the six vocational/industrial arts instructional areas is shown on the following page. The complete tabulation is available in Table C-19, Appendix C.

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* Table C-18, Appendix C presents a cross-tabulation of primary and secondary areas of instruction as reported by respondents.

Area of Instruction and Number of Teachers		Number of Credentials held by General Type			
		Teaching	Administration	Supervision	Counseling
Agriculture	6	11	1	-	-
Business and office	162	210	10	-	7
Health service	22	23	--	-	-
Industrial arts	71	123	4	-	1
Trade and technical	66	77	--	2	1
Public and personal	8	10	--	-	-

Outside Employment Experience of Teachers

The questionnaire survey also sought to develop information as to the teachers' work experience outside the field of education. Teachers were asked whether they had "ever been employed (full-time, part-time, or during vacation) in other than teaching or education administration since 1955." Those who answered "Yes" were referred to a list of job titles and asked to complete an employment experience form.

Three out of every four respondents--1,251 out of 1,667--who answered this question stated that they had worked outside of education within the past ten years, as shown below.*

Present Area of Instruction	Employment Experience Outside Education	
	Yes	No
General education	72.3%	27.7%
Agriculture	50.0	50.0
Business and office	82.7	17.3
Health services	85.7	14.3
Industrial arts	88.7	11.3
Trade and technical	96.9	3.1
Public and personal services	100.0	--

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* Table C-20, Appendix C provides a detailed breakdown of responses by sex, school level, and area of instruction.

Jobs reported by teachers in the employment experience form were grouped according to general areas of employment. A number of teachers reported experience in more than one employment field; in these cases, the two fields with the longest period of employment were recorded. The distribution of jobs reported by field of employment is shown below.*

Employment Field	Percent of Jobs Reported
Agriculture	2.2%
Business and sales	20.1
Office and clerical	15.3
Professional and technical	13.1
Trade and industrial	12.8
Health services	2.8
Military service	9.0
Other	24.7
Total	100.0%

As one would expect, teachers in vocational/industrial arts instructional areas tended toward outside employment in a field generally related to their primary area of instruction. However, the work experience of these teachers was not restricted exclusively to associated job fields; business and office education instructors reported jobs in every employment field, and industrial arts teachers worked in all but the clerical and health services field.

The work experience of teachers of general education subjects is of particular interest since the instructional assignments do not provide any clues to the employment background of teachers in this group. The following table shows distribution by employment field of the 1,271 jobs reported by teachers of general education subjects.

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* Table C-21, Appendix C tabulates jobs by field and area of instruction and by school level of respondents.

Employment Field	Percent of Jobs Reported
Agriculture	2.4%
Business and sales	19.9
Office and clerical	15.7
Professional and technical	12.3
Trade and industrial	10.6
Health services	2.1
Military service	9.1
Other	27.9
Total	100.0%

The employment experience form called for details on the duration as well as the type of each job held. This information was used to develop a series of seven tables--one for general education subjects instructors and one for each of the six vocational instruction areas--that classified outside jobs by area of employment and number of months employed.* A consolidated tabulation of job duration information shows that approximately half of the work experience reported by instructors in general education subjects, agriculture, business and office education, and industrial arts did not exceed a total of 12 months. On the other hand, the health services, trade and technical subjects, and public and personal services instructors reported more jobs of over five years duration than any other group of teachers. This information derived from Appendix Tables C-22 through C-28, is shown below.

Respondent's Area of Instruction	Percent of Jobs by Number of Years Employed					
	1 or less	1-2	2-3	3-4	4-5	Over 5
General education	58.2%	20.4%	9.0%	3.8%	2.5%	6.1%
Agriculture	60.0	40.0	--	--	--	--
Business and office	50.0	10.8	9.0	9.6	3.6	16.9
Health services	15.0	20.0	5.0	10.0	10.0	40.0
Industrial arts	44.3	19.0	17.7	10.1	3.8	5.1
Trade and technical	15.4	20.5	7.7	10.3	6.4	39.7
Public and personal	--	20.0	10.0	--	--	70.0

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* See Appendix Tables C-22 through C-28, Appendix C.

Proprietary Schools

The following presentation is restricted to background information on proprietary school instructors that was developed through a combination of general interviews with school personnel and research in state agency files. Instructors in cosmetology schools and barber colleges have been omitted from consideration, because all teachers in these personal service fields, whether in public or proprietary schools, must hold the instructor's license that is issued by the cognizant state board. Thus, the basic qualifications of this group of teachers do not differ, either within the proprietary school field or between proprietary and public schools.

Instructors from 23 schools are represented in this inventory, as follows:

Type of School	Number of Schools	Number of Instructors
Business and commercial	5	34
Health services	1	3
Real estate	4	4
Trade and technical	8	18
Miscellaneous	5	22
Total	23	81

Distribution by Age, Sex, and Type of School

Instructors vary in age range with the type of school, but in general the average instructor age is higher in proprietary schools than in public schools. The single exception to this rule occurs in the "charm schools," which also include courses in professional modeling; here, the average age of instructors was 29.8 years, with the range extending from 23 to 37 years of age. The following table presents a distribution of proprietary school instructors by school type and by sex and indicates the average age for each school type. A more detailed distribution is presented in Table C-29, Appendix C.

	Number and Average Age of Instructors			
Type of School	Male	Average Age	Female	Average Age
Business and commercial	13	38.5	21	37.2
Health service	--		3	52.3
Real estate	3	49.0	1	69.0
Trade and technical	18	41.2	--	
Miscellaneous	5	51.0	17	30.3
Total	39		42	

Educational Attainment of Proprietary School Instructors

Only three of the 81 instructors had not completed high school; 56 had attended college, and 32 of these individuals had earned degrees. Most of the instructors with college degrees were in the business and commercial schools; however, there were degree-holding instructors in every school type though not in every school within each type. The following tabulation shows the educational attainment of the instructors for each school type.

	Educational Attainment of Instructors (years)				
Type of School	Some High School	High School Graduate	College 1-3	College 4	Graduate School
Business and commercial	-	4	6	15	9
Health service	-	1	1	1	--
Real estate	-	2	1	--	1
Trade and technical	1	6	9	2	--
Miscellaneous	2	9	7	3	1
Total	3	22	24	21	11

Teaching Experience of Proprietary School Instructors

By and large, the proprietary school instructors obtained their teaching experience in other proprietary schools, in the military service, or in industrial training programs. Other than the business and commercial school teachers, there were only two instructors who reported teaching experience in a public school system--a welding instructor who had also taught welding at a junior college and a modeling instructor who had taught elementary art for five years at the 7th grade level. Ten of the 34 business and commercial school teachers reported having taught previously in public schools, but half of these had not taught business subjects classes. Eleven of the trade and technical subjects teachers listed past experience as instructors during military service.

Employment Experience of Proprietary School Instructors

Every proprietary school instructor of this group listed work experience in either the field of instruction or a closely related field, ranging from 3 to 25 years. The trade and technical subjects teachers all reported shop or bench experience, typing teachers listed secretarial positions, the real estate school instructors were active brokers, the medical and dental assisting school staff had hospital and office experience, and the electronics technicians had previous assignments in equipment servicing and assembly.

Chapter 5

DEVELOPMENT OF OCCUPATIONAL CURRICULUMS

Public High Schools and Junior Colleges

Interviews with public school vocational education administrators revealed that although occupational programs are initiated in various ways, two approaches have been common to all local program development: the lay advisory committee and the informal intraschool cooperative council.

The various business and labor advisory committees, each concerned with a specific occupational area, provide guidance to the school authorities in determining whether specialized training should be offered in a given field. These committees also assist in developing a curriculum appropriate to the requirements of the occupation once the decision to initiate a program has been reached, and they keep school officials advised of current patterns within industry in reviewing and evaluating curriculums of ongoing vocational programs.

The cooperative council is an informal committee, consisting of the vocational education deans and directors from all county school systems with comprehensive vocational programs. Regularly scheduled meetings provide for the exchange of information between these school officials regarding plans for additions to the current vocational offerings and progress of existing programs. This arrangement has operated effectively in preventing unnecessary duplication in program development through mutual agreement in assigning exclusive interest for certain specialized programs to individual school systems.

No less than 11 approaches were mentioned by school officials in describing the techniques that were used in deciding to initiate a vocational program. These ranged all the way from subjective interest--"It seemed like a good idea to have a program in printing"--to a combination of staff studies, occupational needs surveys, and labor market information.

These approaches are listed below:

Subjective interest

Advisory committee recommendations

School board recommendations

Investigation of offerings by other schools in California and other regions with similar economic bases

Requests from industry

Requests from professional groups

Requests from labor

Newspaper information, including job offerings

Employment service occupational trends information

Staff studies by school personnel

Cooperative council suggestions and information exchange

A description of the manner in which several programs were initiated will illustrate the application of these approaches in different situations. A two-year program in business data processing has been offered by one of the junior colleges since 1959. This program was first given serious consideration when business publications and trade journals indicated in numerous articles that data processing would have considerable impact on the organization and conduct of business operations. School officials surveyed users and potential users of data processing equipment to determine personnel qualifications and requirements and the degree to which a junior college program might meet these needs. While all industry representatives acknowledged a requirement for trained programmers and other specialists with the introduction of data processing, they were not in agreement regarding the ability of the junior college to provide entry level training in a two-year program. Nevertheless, sufficient information was developed to support a decision to initiate the program, which has proved successful in both student appeal and job placement. This example illustrates program initiation without unanimous agreement by industry regarding the training capability of the junior college.

In another example, a dentist on a junior college school board suggested that the initiation of a program for dental hygienists be explored. Inquiries regarding demand for this skill to the American Dental Hygiene Association produced statements of acute shortage; available positions outnumbered new graduates by two to one. An examination of available programs showed that only three institutions in California, including one junior college, were graduating hygienists. When meetings with local dental societies and the dean of the dental college of University of California verified the estimate of need, staffing arrangements were made to meet the requirements of the State Board of Dental Examiners. The program was started in September 1964, with 17 students selected out of nearly 100 applicants.

School officials were also querried as to whether any programs had been curtailed, suspended, or terminated and, if so, for what reasons. When asked whether instructor availability had ever been a factor in program suspension or in delaying program initiation, all officials stated that no course had ever been dropped because of the lack of a qualified instructor.

The few reported instances of program termination occurred because of an apparent lack of student interest despite well-paying occupational opportunities. An excellent example is the case of a two-year junior college program in ceramic engineering technology, which was terminated after two years. In spite of an intensive effort to publicize the course through newspaper articles, student conferences, preparation of descriptive brochures for student distribution, and visits from representatives of industry, only a handful of students enrolled in the program, and most of these dropped the course.

A somewhat similar situation received considerable publicity when the press reported that despite vocational program offerings in junior colleges, the local electronics industry was recruiting for electronics technicians throughout the country and in Europe to meet pressing manpower needs. Low enrollments in applicable junior college programs were cited as a contributing factor.

This situation was discussed with officials of schools offering programs in electronics technology. All agreed that although initial enrollments were always substantial, they had considerable difficulty in getting students to complete the programs. Some attributed this attrition to the inadequate mathematics background of the students, observing that students well grounded in mathematics would have been encouraged at high school and by their parents to enter more comprehensive engineering programs. One school had established an industry-education council to publicize further the occupational programs to the community, with emphasis on the career opportunities.

Proprietary Schools

All of the proprietary school managers indicated that they generally acted intuitively in initiating courses, basing decisions on their personal estimate of general shortages and a potential student market. Some managers spoke of surveys of need, but when questioned further, they described these as a screening of the "help wanted" sections of local newspapers.

Since these schools are customer-oriented, it is not unusual to find courses announced and subsequently dropped when enrollments fail to justify continuation. During the period of this study, four schools closed and three opened; two of the new schools were providing programs identical to those presented by the unsuccessful schools.

None of the school managers had suspended courses because of instructor shortages. All stated that instructor recruiting posed no problem, and several pointed out that advertisements for instructors, particularly part-time teachers, would usually produce ten or more qualified applicants from which to make a choice.

Part 3

DISCUSSION AND CONCLUSIONS

Chapter 6

DISCUSSION

Instructional Personnel Inventory Techniques

Development of the survey questionnaire required a period of trial and revision during which preliminary versions were pretested. Since it was assumed that the requirement for Bureau of the Budget questionnaire approval would apply to pretest situations involving ten or more respondents, each of the two pretests was conducted with less than ten subjects to avert the time lag that would occur between pretests due to administrative processing of requests for questionnaire approval.

A number of ambiguities in question construction were corrected through pretesting; however, the complete survey uncovered other questions that were subject to considerable misinterpretation and were eliminated from consideration in the tabulation of results. Whether these questions would have been discovered in a more ambitious pretest effort is difficult to determine, but it seems reasonable to assume that a larger pretest group--perhaps approximating 1 percent of the final survey population--might have provided more effective screening.

The questions regarding participation in adult education programs appeared to pose the greatest problem. The intent of the questions was to develop information on teacher experience in evening school programs not organized into a progression of specific career-oriented courses. However, some junior college respondents apparently interpreted the question as referring to the student population in their classes and therefore in answering the questions they described degree programs in the regular curriculum that were offered in evening as well as day periods.

The identification of major teaching fields also called for attention in the editing of returned questionnaires. A number of vocational instructors in trades subjects at the junior college level described their major teaching field as "industrial arts." In such cases, the editors were guided by the list of subjects taught by the respondent in verifying or correcting the reported major area of instruction.

Although the questionnaire survey response rate did not meet the minimum level that would provide generalizable findings, the percentage of returns under the restrictive conditions described below was sufficiently high to warrant optimism regarding the applicability of this technique in replications of the study.

The time schedule was not favorable; teachers received the questionnaires a week or ten days before the close of the school year when they were occupied with final examinations, student grades, and the variety of administrative details related to the completion of a semester. Because of the time limitations, the attempt to enlist teacher cooperation in the survey was restricted to the explanatory cover letter that accompanied each questionnaire. Under such conditions, they could hardly be expected to be enthusiastic about a questionnaire completion requirement, and the fact that over half of the teachers did take time from their schedule to complete the questionnaire is encouraging. With summer vacation following immediately, there was no opportunity for a follow-up effort to develop returns from initial nonrespondents.

Questionnaire delivery through school administrative channels is the most economical system for distribution of survey material. Under this system, there is no requirement to develop and refine a mailing list, a task that is becoming increasingly difficult as faculty organizations place stringent restrictions on the distribution of school personnel directories. Furthermore, the expense of addressing and mailing questionnaires is eliminated, and there is reasonable assurance of simultaneous delivery of survey material to all potential respondents.

On the other hand, bulk delivery makes follow-up of nonrespondents extremely difficult, since no roster is used in making distribution. This calls for the development of a roster of respondents in order that school officials can identify missing names and make the follow-up distribution. Questionnaires reaching instructors through school delivery must also compete for attention with the variety of administrative notices on school business that teachers receive every day through distribution.

On the basis of experience gained in this initial test of the use of a questionnaire survey, several possible modifications of the distribution system are apparent. The economies of bulk distribution have been presented, and the return rate in this test was sufficiently high to justify repeating this procedure under more favorable circumstances. However, since this system involves all teachers, the large number of returns demands a substantial expenditure of time and money for editing questionnaires and converting the information for subsequent machine analysis.

If comparative information is not desired, a limited bulk distribution might be used, with questionnaire delivery restricted to those teachers in vocational subject areas. However, this also calls for specific and detailed delivery instructions that may be time-consuming to develop and may be subject to misinterpretation at the delivering office. Close supervision of the distribution procedure would undoubtedly be required to ensure that all potential respondents received questionnaires. Nevertheless, this system still offers economies; mailing and addressing expenses are eliminated, and the quantity of material for editing and data transfer is greatly reduced. In the survey just completed, for example, use of limited bulk distribution would have reduced the editing and transfer effort by 60 percent.

Finally, a mailed distribution--either general or restricted--is worthy of consideration. However, this technique is the most time-consuming and costly of all approaches to the survey task and poses the additional problem of developing an accurate mailing list.

Since the basis of a mail survey is the address list, follow-up of nonrespondents presents no problem. Follow-up in bulk distribution systems, while difficult and time-consuming, is not an insurmountable obstacle. If approval can be obtained from teacher organizations for access to the personnel directory, nonrespondents can be identified for follow-up attention by mail, telephone, or interview. Should permission for use of the directory be withheld, a list of teacher's names is usually available in the school office. However, since such lists do not contain home address information, follow-up inquiries must be directed to identified nonrespondents at school. Finally, a roster of instructors can be developed through use of the school catalog in conjunction with the current schedule of classes.

Regardless of the distribution system used, consideration should be given to possible conflicts with the school schedule. It would seem reasonable to avoid any distribution within a month preceding the close of a semester or an extended holiday period, and initiation of a survey in the fall would be preferable to an attempt in the spring, in view of the time available for follow-up of nonrespondents.

Survey Findings

The presentation in Chapter 4 of findings developed through the questionnaire only suggests the potential inherent in a rigorously structured survey effort. The possibilities for relationships are extensive, but space and time limitations made it necessary to ignore many possible analyses. Those that reflect teaching status, mobility, and work experience appear particularly worthy of discussion.

Much has been made of the difficulties in mounting and sustaining a vocational education program because of the problems of competing with industry for experienced personnel as instructors. However, the extensive use of part-time teachers reported in vocational subjects areas by local junior colleges indicates that a substantial program can be developed with considerably less than full-time staffing. If this finding regarding the respondent group accurately reflects the total population distribution, it gives rise to further questions regarding an optimum mix of full- and part-time instructors in locales where qualified personnel for full-time duty are in short supply.

The holding power of the local school systems is reflected in the substantial number of instructors whose teaching careers have been in Santa Clara County schools. One factor that may contribute to this situation is the location of three universities in the county, all providing teacher education and opportunities for advanced study on a year-round basis. One might also hypothesize that the number of instructors with only local teaching experience is high because the use of part-time instructors from industry is somewhat unique to this locale.

The work experience reports are of interest in view of current state requirements that vocational subjects teachers meet criteria of occupational competency to include employment in a field directly related to the subjects of instruction. Specialization in vocational trade and technical teaching calls for at least three years of occupational experience, with one year of this experience within three years of the application for credential.

Work experience data reported by respondents suggested that the industrial arts instructor group might represent a resource for vocational subjects instructors. However, the recency provision regarding experience within the past three years may preclude any shifting of instructors from industrial arts to vocational subjects, particularly since most industrial arts teachers work outside of education only during the summer months and thus could not accumulate the required experience within the three-year time limit.

In this connection, a recent change in state policy may have established a precedent for utilization of industrial arts instructors in vocational subjects should a critical shortage of vocational instructors develop. The state has relaxed its credential requirements in trade and industry subjects to cover situations in small high schools where only one person is required or available to teach both industrial arts and a vocational subject. Here, the holder of an industrial arts credential can qualify for vocational subjects instruction with two years of work experience in the related field, and this experience is not subject to the recency requirement.

Proprietary School Operations

The following discussion briefly summarizes the salient features of proprietary school activities, which are covered in more detail in Appendix B. On the basis of enrollment data, it appears that the proprietary schools might be making a more substantial contribution in instructional areas that are also in the public school domain than had been suspected. The effectiveness with which these schools prepare students for employment and place graduates in jobs could not be assessed with any high degree of confidence, but fragmentary data indicated that the majority of students from certain schools had little difficulty in finding employment related to their training.

Since it appeared that most students in the proprietary schools could meet the admission requirements of the junior colleges or the evening adult education programs, one must ask why an individual would invest a substantial sum for a study program that was also being offered at no charge in a public institution. Students most frequently mentioned time convenience and course content in explaining their decision to enroll in a proprietary school program. They observed that they usually could start class within a week after enrolling, and that the course length set completion within a relatively short period of time--less than a year and often under six months. They pointed out that the curriculum was entirely skill-oriented and free of what they considered to be nonessential subjects. Finally, many students mentioned placement service, believing that the school's continuation as a commercial enterprise would depend on the degree to which its students were successful in securing employment after training.

The detail developed on instructor educational background and employment experience suggests that most proprietary school instructors could satisfy the basic qualifications for teaching assignments in those public school vocational programs that do not require a general education teaching credential. Yet, the teaching experience reported by most proprietary school instructors seldom included a public school affiliation; and, similarly, few public school teachers indicated that they had proprietary school teaching backgrounds. Further investigation into the characteristics of proprietary school teachers might provide some rationale for this apparent lack of interest on the part of each teacher group for employment in the other's field.

The operation of a number of these schools as vendors in local, state, and federal government-sponsored training programs suggests that they might also represent a potential for expansion of public school vocational programs, particularly in areas of short term or modest student demand.

Program Planning and Development

Though the manner in which interest in program possibilities is first stimulated apparently varies with each situation, the planning that precedes the eventual decision to initiate or to drop a program has involved some form of occupational needs survey and enlisted the assistance and guidance of an advisory committee in a related occupational field. The occupational surveys may be quite informal; the verification of employment opportunities through screening of "help wanted" advertisements or a series of visits with managers or personnel directors of firms and businesses in the field. They may also be quite detailed, with assistance from state employment service offices and reference to labor market surveys and projections.

However, in most cases, attention is directed to the requirements of the immediate locality. This poses no problem in Santa Clara County where the personnel requirements of business and industry are not peculiar to this locale. However, there are dangers in planning on the basis of local needs alone if the local situation should differ considerably from the regional, state, or national pattern.

The occupational needs orientation in program planning may overemphasize the attractiveness of employment opportunities in developing a student clientele for a program. The experience in the ceramics technology course and the present difficulties in maintaining full enrollments in electronics technology classes suggest that program planning might give additional consideration to whether the proposed educational offerings will be regarded as attractive by the persons for whom such services are intended.

In planning junior college programs, school administrators indicated a definite preference for developing curriculums that would lead to the associate degree and a reluctance to provide counterpart certificate programs of shorter duration. As one administrator put it: "Those short courses are the business of the proprietary schools and have no place in a junior college." This reflects the strong feeling and concern over the effect that the introduction of occupationally oriented short courses might have on the recently achieved status and prestige of the vocational education programs. One might then question whether the "image" of a potential program might not have considerable significance when consideration is being given to its inclusion in the regular curriculum.

Chapter 7

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The conclusions listed below relate directly to the basic aim of the research; i.e., the development in a limited geographical area of an empirically tested approach for a descriptive inventory of vocational education teachers and an evaluation of the data collection and analysis procedures for their applicability in a more comprehensive audit.

1. Inadequacies of program definition and description and the variety of reporting formats and addressee agencies prevent development of an accurate descriptive inventory of instructor personnel (with detail on age, academic background, and teaching experience) from existing data sources.

2. Use of a personal inventory questionnaire distributed to public school teachers appears to have the most potential for developing background information on vocational instructors.

3. The response rate achieved with bulk distribution through school administrative channels without follow-up, while above 50 percent, was not sufficiently high to permit generalization from substantive findings.

4. The high degree of interest and cooperation shown by school officials in arranging for pretests, scheduling interviews, and providing for questionnaire distribution holds considerable promise for similar extended studies that will enlist the support and involvement of such educators.

5. The lack of a comprehensive current directory of proprietary vocational schools necessitates development of a proprietary school list before any investigation of programs and staff characteristics.

6. Enrollment data suggest that proprietary schools might be making a more substantial contribution in instructional areas also in the public school domain than had been generally accepted.

7. Experience in this and prior studies continues to indicate the extreme difficulty of developing a list of training programs in industry that includes activities other than scheduled classes for employees.
8. Schools are making extensive use of the instructor resources currently available in industry for vocational programs. This conclusion is supported by the large number of vocational subjects instructors who reported substantial employment experience and part-time teaching status in the questionnaire survey.
9. All planning for program development has included some form of occupational needs information although the techniques for developing such information vary with each educational situation.
10. Junior colleges appear to show little enthusiasm for the introduction of programs that do not accommodate to a curriculum structure leading to an associate of arts degree.

Recommendations

A critical issue in the interpretation of the substantive results of the present questionnaire survey, and in the design of follow-on studies employing the survey technique, is the response rate--approximately 55 percent without follow-up effort--of the trial survey. The next step, which seems worthy of high priority effort, is to determine whether the findings were significantly biased, given the 55 percent response rate. This requires analysis of the characteristics of initial nonrespondents and their responses to questionnaire items. If, through a follow-up effort, it can be demonstrated that nonrespondents to the initial questionnaire circulation are not different from respondents and that their responses would not change the results, the findings from the initial 55 percent respondent group can be interpreted with greater confidence.

If, on the other hand, nonrespondents are found to be significantly different from initial respondents, future research must include adequate follow-up procedures to develop appropriate samples of the initial nonrespondent population. Such follow-up responses can then be properly weighted and included in the findings to provide results generalizable for the total population of teachers.

Thus, the next effort should approach this problem either through an identification and subsequent follow-up of nonrespondents in the original Santa Clara County trial or as an element of a new area investigation. The latter approach seems more appropriate, since it might be incorporated in a broader study that would analyze the effectiveness of at least three techniques for follow-up. Within a five-community replication of the initial study, one might consider follow-up by direct mail, by telephone, and by the bulk distribution system with selected participants. One or all of these follow-up techniques could be pursued through a third attempt to optimize response rates.

The most reasonable and economical approach would be to undertake surveys similar to that conducted in Santa Clara County in at least five different communities (counties or school districts) carefully selected to represent differences in dimensions that might affect either results or methodology. Such an extension of the basic approach would apply such procedural experience from the Santa Clara County study as the following:

1. A revised questionnaire based on initial survey experience.
2. An intensified effort to describe the purposes and objectives of the survey before initial application to stimulate participant interest and raise the response rate.
3. Distribution scheduling to eliminate potential conflicts with other administrative demands on teachers.
4. Incorporation of follow-up procedures to secure data on nonrespondents to the initial information request.

Such a study effort would achieve the following objectives:

1. Provide a cross-validation test of the generalizability of the substantive findings from Santa Clara County and the various new locales.
2. Provide a test of the bias introduced by nonresponse.
3. Refine further the survey instrument for more extensive applications.
4. Test the generalizability of the overall methodology developed in the pilot effort.
5. Provide substantive findings with a greater degree of reliability and validity for national consideration.

Locations for this next effort should be selected to represent control on two major parameters, geographical location and area size. Since there may be regional variations in the variables under study, it would appear proper to select geographical locations in the (1) central Atlantic, (2) north central, (3) south central, (4) southwest, and (5) northwest regions of the nation. While there may be variations because of the size of the administrative unit, it appears wise to hold size constant as far as possible, with the preferred size approximating that of the original study area, Santa Clara County.

The following tabulation outlines the proposed research design. Note that the design assumes that questionnaire construction and the initial distribution procedure will be constant for all locations. States containing locations that might be studied are suggested for each of the cells; however, this selection will require further consideration and discussion and is offered at this point only to indicate the contemplated breadth of the second phase effort.

Follow-up Technique	Geographical Region				
	Central Atlantic	North Central	South Central	Southwest	Northwest
Direct mail			Louisiana		Washington
Bulk distribution	Pennsylvania			New Mexico	
Bulk distribution and telephone		Michigan			

Admittedly, the foregoing does not provide a perfectly balanced research design; however, this approach should prove adequate for a second phase test of the methodology and validation of findings. Such findings would either support a decision to undertake a more ambitious survey or to continue development of the methodology through additional surveys in the missing cells of the above matrix.

Chapter 8

SUMMARY

The immediate aim of the research was to develop approaches for a descriptive inventory of vocational education instructors and to evaluate the appropriateness of various data collection procedures for a regional or national audit by testing them in an economical small sample. Primary attention has been focused on the variety of data and interrelationships that collection procedures can yield rather than on an evaluation or assessment of the efficacy of the current education effort in the sample area.

Santa Clara County, California, was selected as the sample area because it was geographically convenient and because it provided a range of conditions similar to those that might be encountered in a regional or national survey. These characteristics included a diverse economic base, different levels of urbanization, both public and proprietary schools with occupational training programs, and organized labor activity in setting employment standards, apprenticeship programs, and training.

Method of Approach

Initial effort was directed toward identification of the total array of vocational education programs in the sample area. Under the broad definition of vocational education--instruction that prepares individuals for entrance to and advancement within an occupation but does not lead to the baccalaureate degree-consideration was given to programs of training within industry, job training courses by profit-making schools, and government-sponsored occupational training programs, as well as formal instruction within the public school framework.

The descriptive inventory of courses and programs in public high schools and junior colleges was developed from state and local catalogs, but identification of the proprietary school offerings first required preparation of a listing of such schools. Through correspondence and visits to these profit-making schools, a comprehensive inventory was developed that permitted comparison of offerings at the public and private school levels.

Similarly, details on formal programs of training in industry were obtained through interviews with personnel directors, and the government-sponsored programs, all initiated through the State

Department of Labor under the Manpower Development and Training Act, were identified at meetings with officials of the California State Employment Service.

Background information on instructors in proprietary schools, including educational background, teaching experience, and occupational training, was developed in interviews with school officials and verified through examination of files and records in the cognizant state agencies. However, it was soon apparent that a similar approach to develop information on public school instructors would be uneconomical and would fail to achieve the desired degree of comprehensiveness and reliability. In some instances, background information was contained only in personal history files, which were treated as privileged information; other data that related instructors to programs were cast in a wide variety of formats and administratively controlled by several offices in different geographical locations.

Accordingly, attention was directed to the development of a self-administered questionnaire that would obtain information on the educational background, teaching experience and status, and employment experience of public school instructors in the county. Distribution was effected through school administrative channels to all instructors following review and approval of the 43-item questionnaire by the designated Office of Education committee.

A number of the questions concerning residence, tenure, and credentials were designed to serve as indicators of sources of vocational subjects instructors, as well as to provide background information. In addition to these data, information on instructor sources and resources was obtained through personal interviews, both with public and private school administrators and with state officials concerned with the administration of the recruitment and credential program.

In all interviews, attempts were made to trace the development of programs from their inception to their initiaition, particularly the relative importance of such factors as occupational needs, instructor availability, funding, and explicit requests from industry or labor in the decision-making process. Discussions were not restricted to ongoing programs but also considered those instances where programs had been initiated and subsequently curtailed or suspended.

Methods of Analysis

In cataloging the public school vocational programs, curriculum outlines provided sufficient information for determining course comparability in those instances where titles might prove misleading. Proprietary school and other agency course offerings were classified according to course objectives, length, student clientele, and, where applicable, fees and tuition. Programs were compared to determine which were exclusively in the public or private school domain and which were common to both. Common programs were compared on the basis of admission requirements, course length, frequency of offering, and completion criteria.

Questionnaires returned from public school teachers were edited, coded, and transferred to punch cards for machine data processing. The resultant frequency distributions and cross-tabulations were analyzed within and between a wide range of descriptive variables, such as age, sex, employment experience outside teaching, educational attainment on entry to teaching, mobility within the school system both geographically and at levels of instruction, primary and secondary teaching fields, and teaching experience within the present field of instruction.

Background details on instructional personnel of proprietary schools were compared with current credential criteria for instructors in public school systems to determine the degree to which such individuals could satisfy the staffing needs of public school programs under existing credential requirements.

Results

At the high school level, the availability of vocational offerings varies widely throughout the county. While one district of four high schools provides some 22 different, occupationally oriented programs, there are a number of schools in which vocational courses are limited to the general office occupations area. These are the only programs specifically designed to prepare high school students for employment on graduation; however, all high schools offer industrial arts and business education courses as elements of the general education curriculum. Many students view these courses as preparation for job entry and, in fact, do obtain employment related to the skills acquired in such classes.

Public vocational education is concentrated at the junior college level where programs are currently available in 50 occupationally oriented curriculum areas. These offerings are divided among the four schools in the county; however, only 13 programs are common to two or more schools. Interdistrict agreements permit a student interested in a program not offered at his local junior college to attend the college offering the course, and thus a comprehensive catalog can be made available to all students in the county without extensive duplication of offerings at the local district level.

Proprietary school programs tend to concentrate in the commercial, personal services, and trade and technical areas. The 38 resident schools for profit show substantial enrollments in the cosmetology, health services, real estate, and business and commercial fields where they match or exceed the junior colleges in annual student output, but they fall well below the public schools in the trade and technical areas in terms of numbers of students enrolled.

Almost all of the Manpower Development and Training Act programs are conducted at public school facilities, and current offerings, with one exception, are divided between health services and business and clerical occupational areas. Of the 11 programs in progress at the time of this study, four were for adults (persons 22 years of age or older), one was a youth program (17 through 21 years of age), and six enrolled both youths and adults.

The scope of educational activity in industry was difficult to assess, even among companies whose operations were in similar industrial areas. In some cases, a schedule of formal courses was maintained, but in others, considerable instruction was being carried out under the general classification of on-the-job training without formal sequence or specific definition of goals. Accordingly, attempts to develop a comprehensive enumeration of training programs in industry were unsuccessful.

The questionnaire survey of public school teachers was initiated in the last week of May and closed on July 15, 1966. Despite the inopportune timing that precluded a follow-up effort for nonrespondents, the initial distribution of 3,050 questionnaires produced an overall response rate of 55.3 percent. The lack of detailed information on various background characteristics did not permit application of tests to determine the degree to which respondents represented an acceptable sample of the total population; however, it was determined that the respondent distribution by sex and school level approximated the total population distribution within 5 percent. It was also found that respondent distribution on the basis of primary area of instruction approximated total population distribution within 10 percent at the junior college level and within 3 percent at the high school level.

Although promising, these two comparisons alone would not support generalizable findings, given the 55 percent response rate; however, the survey results indicate the types of data that can be acquired through application of this methodology and the kinds of relationships that can be derived.

Findings on teaching status, mobility, and work experience of respondents indicated that a substantial program in vocational subjects has been developed through use of part-time teachers who are regularly employed in industry. The work experience reports also suggest that the industrial arts instructor group might represent a resource for vocational subjects instructors if the recency provisions for work experience in state vocational credential requirements were relaxed.

On the basis of enrollment data, it appears that proprietary schools might be making a more substantial contribution in instructional areas also in the public school domain than had been suspected. Detail developed on proprietary school instructors indicates that most of these individuals could satisfy basic qualifications for teaching assignments in public school programs where a general credential is not mandatory. The educational attainment and work experience of such instructors generally approximated that of their counterparts in similar instructional areas at public schools.

Program planning and development in the public schools entails some form of occupational needs survey, ranging from informal inquiry to a group of potential employers to detailed study of the short and long range prospects for economic growth and the transferability of basic skills as job opportunities shift within a given field. In most instances, attention is restricted to the needs of the immediate locality. However there is reason to believe that program planning might give further consideration to the degree of receptiveness with which students and parents will view new programs. Despite favorable employment prospects, some programs have not achieved their anticipated enrollments and in a few cases have subsequently been dropped from the curriculum for this reason.

With most public vocational education programs concentrated in the junior colleges in Santa Clara County, there appears to be a tendency to restrict consideration of programs to those that will accommodate to the two-year curriculum and lead to an associate of arts degree. Junior colleges do offer some counterpart certificate programs of shorter duration that concentrate exclusively on skill development; however, these are not available in all instructional areas, and thus student choice is often restricted to the two-year option.

Recommendations

The survey technique developed for this pilot effort appears economically feasible and offers considerable promise for developing background information on vocational instructors. However, the degree of confidence with which survey findings can be interpreted depends on whether nonrespondents differ significantly from initial respondents. In the absence of a follow-up effort on the pilot survey, the 55 percent response rate did not permit generalization from findings recorded for the respondent group.

Accordingly, a second phase effort in five or six different regional locations that would provide a cross-validation test of the generalizability of the substantive findings from Santa Clara County and new locations is recommended. This activity would utilize a revised questionnaire, and distribution would be so scheduled as to eliminate conflicts with other administrative demands on teachers and would incorporate follow-up procedures to secure data on nonrespondents.

Locations for this effort should be selected to represent control on region and area size, with size approximating that of the pilot study area. Questionnaire construction and initial distribution procedures will be constant for all locations. Three follow-up techniques would be applied, one to each pair of locations. It is believed that such an approach would prove adequate for a second phase test of the methodology and validation of findings to support either a decision to undertake a more ambitious survey or to continue development and refinement of the methodology.

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APPENDIXES

Appendix A

PUBLIC SCHOOL INSTRUCTIONAL PERSONNEL INVENTORY QUESTIONNAIRE

SRI

STANFORD RESEARCH INSTITUTE

MENLO PARK, CALIFORNIA 94025

May 20, 1966

Dear Faculty Member:

We wish to enlist your cooperation in an important phase of a pilot planning study that Stanford Research Institute is conducting in Santa Clara County. The broad objectives of this study are concerned with factors that affect the present and potential availability of instructors for vocational education programs.

Our research to date indicates a need for comparative information on instructors in vocational and non-vocational programs. For example, are there differences in the mobility of instructors in various fields; is there any relation between personal programs of additional study and the various teaching fields; to what degree, if any, does the time an individual enters teaching vary with the major field of instruction.

To explore these and similar questions, we have designed the attached questionnaire and we seek your assistance and cooperation in providing us with the necessary information. As you will see, all questions ask only for objective information and most can be answered quickly with a check mark, a date, or one or two words.

All replies will be kept strictly confidential. The tabulations will be handled by computer at Stanford Research Institute, and the content of individual questionnaires will neither be disclosed nor forwarded to any agency or individual. A stamped self-addressed envelope is attached for your use in mailing your completed questionnaire to Stanford Research Institute. If you have questions regarding this study, enclose a note with your questionnaire and we will try to answer them. Thank you for taking time from your schedule to participate in this research effort.

Sincerely,

Edward A Podesta

Edward A. Podesta
Behavioral Sciences Research

PROFESSIONAL STAFF INVENTORY

1-
2-
3-
4-
5-

SCHOOL____ DATE____________________

YOUR NAME (Please print or type)* ____
LAST FIRST MI

* We are asking for your name only to record the fact that you have returned the questionnaire and thus exclude you from follow-up mailings. This survey is completely anonymous; your name will not be associated with the findings in any way. Please ignore the small numbers beside each item — these are codes for IBM purposes only.

1. Age at last birthday.

6-
7- ____________

2. Sex

8-1 ________Male
-2 ________Female

3. Have you lived in California all your life (except for boarding school, college, and/or military service)?

9-1 ________Yes
-2 ________No If your answer is No, in what year did you most recently move to California?

10-
11- ________
YEAR

4. In what county do you now live?

12-1 ________Santa Clara
-2 ________San Mateo
-3 ________San Benito
-4 ________Alameda
-5 ________Santa Cruz

Other – indicate below

-6 ________________________________
COUNTY

5. When did you most recently move to that county?

13-
14- ________
YEAR

6. In what state (or county if in California) did you live before moving to the above county?

15-
16-
17-
18- ________________________________
STATE OR CALIFORNIA COUNTY

7. In what year did you begin teaching?

19-
20- ________
YEAR

8. How many years have you taught since that time?

21-
22- ________Years

9. Where (city and state) did you first teach?

23-
24- ________________________________
CITY STATE

10. What was the level at which you first taught?

25-1 ________Elementary
-2 ________Secondary
-3 ________Junior College
-4 ________Business College or Commercial School
-5 ________Private Trade or Technical School
-6 ________Adult Education

Other – indicate below

-7 ________________________________

11. In what year did you begin teaching in this school district?

26-
27- ________
YEAR

12. In what year did you begin teaching in this school?

28-
29- ________
YEAR

13. Did you teach at another school before coming to this school?

30-1 ________Yes (see below)
-2 ________No

If your answer was Yes, where was the school located (city and state)?

31-
32- ________________________________
CITY STATE

14. Please indicate your present teaching status.

33-1 ________Permanent, full-time
-2 ________Permanent, part-time
-3 ________Probationary, full-time
-4 ________Probationary, part-time
-5 ________Substitute, full-time
-6 ________Substitute, part-time

15. How many teaching hours (lecture + lab) per week do you carry this semester?

34-
35- ________Hours per week

16. What single teaching field (e.g., art, business education, mathematics, electronics technology, industrial arts, general science) accounts for all or most of this instruction?

36-
37- ________________________________
TEACHING FIELD

17. How many of your total teaching hours (lecture + lab) per week are in this field this semester?

38-
39- ________Hours per week

18. What subjects in this field are you teaching this semester?

40-
41- ________________________________
42-
43- ________________________________
44-
45- ________________________________
46-
47- ________________________________
48-
49- ________________________________

19. During your entire teaching career, how many semesters have you taught subjects in this field?

50-
51- ________

20. Do you also teach subjects this semester in another teaching field?

52-1 ________ Yes (see below)

-2 ________ No (turn to Question 23)

If your answer was Yes, please indicate the additional field(s) below:

53-
54- *a.* ____________________

55-
56- *b.* ____________________

21. How many of your total teaching hours per week are in these additional fields this semester?

57-
58- ____________ Field *a* (from 20 above)

59-
60- ____________ Field *b* (from 20 above)

22. What subjects in these additional fields are you teaching this semester?

In Field *a*

61-
62- ____________________

63-
64- ____________________

In Field *b*

65-
66- ____________________

67-
68- ____________________

23. Please list all valid California teaching credentials that you now hold and indicate the year first issued after each.

69-
70-
71- ____________________
(CREDENTIAL) (YEAR ISSUED)

72-
73-
74- ____________________

75-
76-
77- ____________________

24. Please list all non-teaching credentials, professional licenses, registrations, and certifications that you hold or have held and indicate the year granted after each.

6-
7-
8- ____________________
(LICENSES, ETC.) (YEAR GRANTED)

9-
10-
11- ____________________

12-
13-
14- ____________________

25. In what year did you graduate from high school?

15-
16- ________
YEAR

26. Where (city and state) was high school located?

17-
18- ____________________
CITY STATE

27. When you first entered teaching, how many years of schooling had you completed? Circle highest grade.

19- High School	20- College (Under- graduate)	21- College (Graduate school)
1 2 3 4	1 2 3 4	1 2 3 4 5 6

28. What was your major?

22-
23- (Undergraduate) ____________________

24-
25- (Graduate) ____________________

29. What was your minor?

26-
27- (Undergraduate) ____________________

28-
29- (Graduate) ____________________

30. Where was the school located which you last attended before you began to teach?

30-
31- ____________________
CITY STATE

31. What diploma, certificate, or degree did you receive from that school?

32-1 ________ None

-2 ________ Certificate

-3 ________ Associate

-4 ________ Bachelor

-5 ________ Master

-6 ________ Doctor

-7 ________ Credential

-8 ____________
OTHER

32. How many additional semester credit hours of study have you completed since you first entered teaching?

33-1 ________ None

-2 ________ 1 – 15

-3 ________ 16 – 30

-4 ________ 31 – 45

-5 ________ 46 – 60

-6 ________ Over 60

33. What proportion of these was either in or directly related to the teaching field that now accounts for all or most of your instruction?

34-1 ________ None

-2 ________ All

-3 ________ Less than 1/4

-4 ________ Between 1/4 and 1/2

-5 ________ 1/2 or more

34. How many additional semester credit hours of study have you completed in the last three years?

35-
36- ________

Please indicate the fields of study and number of semester credit hours below.

37-
38-
39-
40- ____________________
FIELD HOURS

41-
42-
43-
44- ____________________

35. What is the highest degree you now hold?

45- ____________________
DEGREE

36. In what year did you receive this degree?

46-
47- ________
YEAR

37. Do you anticipate receiving an additional credential or degree in the next few years?

48-1 ________ No

-2 ________ Maybe

-3 ________ Yes (see below)

If Yes, please indicate degree or credential and field below:

49-
50-
51- ____________________
DEGREE FIELD

52-
53- ____________________
CREDENTIAL TYPE

38. **Have you ever taught classes in adult education programs?**

54-1 ________ Yes (See Questions 39-42)

-2 ________ No (Turn to Question 43)

39. **What subjects have you taught in adult education programs?**

55-56- *a.* ________________________________

57-58- *b.* ________________________________

59-60- *c.* ________________________________

61-62- *d.* ________________________________

40. **Have you taught any of the above subjects in adult education programs since 1960?**

63-1 ________ Yes

-2 ________ No (Turn to Question 43)

41. **Which of the above subjects have you taught in adult education programs since 1960? Circle the appropriate letter(s).**

64-	65-	66-	67-
a	*b*	*c*	*d*

42. **Where (city and state) did you most recently teach the subjects that you circled in the above question?**

68-69- Subject *a* ________________________________
CITY STATE

70-71- Subject *b* ________________________________

72-73- Subject *c* ________________________________

74-75- Subject *d* ________________________________

43. **Have you ever been employed (full-time, part-time, or during vacation) in other than teaching or education administration since 1955?**

76-1 ________ Yes (See below)

-2 ________ No (See below)

If your answer is Yes, please see below.

If your answer is No, please check the preceding questions to make certain that you have not inadvertently omitted any answers. Return the completed questionnaire in the attached stamped envelope. Again, thank you for your assistance and cooperation in participating in this survey.

OTHER EMPLOYMENT EXPERIENCE SINCE 1955

We are interested in your employment experience OTHER THAN TEACHING OR EDUCATION ADMINISTRATION since 1955. The list of various job titles below has been prepared for your use in completing the employment experience form on the following page. If your particular position title does not appear on the list, please enter it in the space provided for this purpose (33 – 39).

EMPLOYMENT CODE – FOR USE WITH EMPLOYMENT FORM (Next Page)

1. Accountant or auditor
2. Automobile mechanic
3. Bookkeeper
4. Cannery worker
5. Carpenter
6. Cook
7. Cosmetologist
8. Deliveryman
9. Dietician
10. Draftsman
11. Electrician
12. Electronics technician
13. File clerk
14. Gardener
15. Machinist
16. Medical or dental assistant
17. Nurse
18. Painter
19. Plumber
20. Receptionist
21. Sales Clerk
22. Salesman, inside
23. Salesman, route or outside
24. Secretary
25. Service station attendant
26. Sheet metal worker
27. Stenographer
28. Surveyor
29. TV or radio repair
30. Truck driver
31. Typist
32. Waiter or waitress

Other – write in below

33.. ________________________

34. ________________________

35. ________________________

36. ________________________

37. ________________________

38. ________________________

39. ________________________

EMPLOYMENT EXPERIENCE SINCE 1955

(Other Than Teaching or Education Administration)

Please list in the form below all organizations and firms by which you have been employed since 1955 (excluding short-term military service such as two-week summer camp). Include vacation employment, weekend employment other than casual short-term jobs, and regular part-time employment.

By way of example, the first line of the form has been completed to illustrate the case of a teacher who for the past two years has worked as a clerk in a department store for two months each summer and two weeks each Christmas vacation period.

Name of organization or firm for which you worked (Journeymen may indicate Union Locals instead of listing individual firms or contractors)	Years during which you worked for this employer.		Number of months during this period in which you worked.	Your principal job. Enter the proper number from the employment code.	Average number of hours you worked per week (Check the appropriate column)			
	From	To			Under 10 hrs.	11-20 hrs.	21-34 hrs.	Over 34 hrs.
(Example) Johnson's Dry Goods	1963	1965	5	21			XX	

This is the final page of the questionnaire. Please recheck each page to make certain that you have answered all applicable questions. Use the attached stamped envelope to return the completed questionnaire. Again, we thank you for your assistance and cooperation in participating in this survey.

Appendix B

AN EXPLORATORY SURVEY OF PROPRIETARY VOCATIONAL SCHOOLS

STANFORD RESEARCH INSTITUTE

MENLO PARK, CALIFORNIA

AN EXPLORATORY SURVEY OF PROPRIETARY VOCATIONAL SCHOOLS

By Harry V. Kincaid and Edward A. Podesta

Stanford Research Institute

Prepared for presentation at the Research in Vocational and Technical Education Conference at the University of Wisconsin
June 10, 1966

AN EXPLORATORY SURVEY OF PROPRIETARY VOCATIONAL SCHOOLS[1]

Introduction

The number and variety of vocational education offerings by proprietary schools advertised in newspapers or listed in telephone directories are particularly striking to persons interested in vocational education in the United States. Yet, surprisingly little is known about the role of these schools in the total scheme of vocational education, the effectiveness with which they perform their educational function, how they organize resources (human and physical) to achieve their objectives, and the nature of the clientele they serve. Since evidence indicates that proprietary schools are a significant part of the total educational resources of the community[2] much more needs to be known about them if educational policies and programs are to be made more consonant with the needs of our society. In short, proprietary schools represent a national resource. The gaps in our knowledge concerning these schools must be closed before effective decisions can be made concerning their optimum utilization.

We conducted an exploratory survey of proprietary schools in Santa Clara County, California.* The primary objective of the study was to conduct an inventory of proprietary schools in the county for the purposes of (1) developing preliminary ideas on methods that might be used in broader scale studies and (2) formulating hypotheses that seem worthy of testing on a more systematic basis. The specific findings cannot be generalized beyond Santa Clara County; however, the methods and hypotheses generated may be useful for more ambitious studies.

Scope of Proprietary School Activity

In the absence of a comprehensive national inventory of proprietary vocational schools,[3] a suggestion of the scope of this activity can be obtained by referring to the membership reports of various associations and accrediting organizations. For example, the 1966 directory of United Business Schools Association lists 441 private business or commercial schools in the United States as members,[4] and the National Association of Cosmetology Schools has more than a thousand affiliated institutions.[5] A recent article on the training of medical and dental assistants observed that Career Academy, Inc., which claims to be the nation's largest private school in that field, has trained between 7,000 and 10,000 students since 1961.[6]

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* The research reported herein was performed in connection with a pilot study pursuant to a contract with the United States Department of Health, Education, and Welfare, Office of Education, and will be incorporated in the final report, Supply and Demand Factors Affecting Vocational Education Planning, to be submitted to that agency.

Some detailed information can be developed at the state level on proprietary school activity, but the comprehensiveness of such data varies with the degree and level of control exercised by individual states over proprietary school operations. A 1965 tabulation by the California State Department of Education listed 469 proprietary schools offering either resident or correspondence courses authorized or approved under the provisions of the California Education Code.[7] Adding to the 215 private cosmetology schools and 26 approved barber colleges this total increases the number of proprietary vocational schools to more than 700 in California. The aggregate offerings of these schools provide students with a choice of more than 250 courses, ranging from the commonly known business and commercial or trade and technical subjects to programs in commercial deep sea diving, horseshoeing, stunt training for motion pictures, and candle making.

As the 1965 California totals indicated, cosmetology schools dominated the proprietary schools field, business and commercial schools followed, and real estate schools ranked third. These three school groups also represent the three classifications of proprietary vocational schools in terms of educational objectives: (1) preparation for employment, (2) preparation for a licensing examination, and (3) a combination of both.

The schools that offer resident instruction cluster about the two major population centers--the Los Angeles-San Diego area and the San Francisco Bay and Peninsula area. Beyond these metropolitan centers, the offerings are limited. Chains of proprietary schools, either under single ownership or as franchised activities, are not uncommon; however, with the exception of a few national systems that franchise branch schools, most chains are regionally oriented, either in Southern or Northern California.

Local control over proprietary schools in California is generally confined to licensing of the institutions as commercial enterprises under applicable local business and safety codes. Matters pertaining to curriculum, instructional staff, facilities, and enrollment solicitation are the concern of the state, primarily the Superintendent of Public Instruction through the Bureau of Readjustment Education, the State Board of Cosmetology, and the State Board of Barber Examiners.

Private vocational schools seeking approval through the Bureau of Readjustment Education must meet specific criteria.[8] These criteria include comparability of course content and quality with similar courses in public schools or other private schools; adequacy of space, equipment, and instructional material; financial responsibility; and maintenance of accurate student records. Minimum requirements for instructor qualification are five years of successful experience in the trade, industry, or occupation on which the instructor is to teach or a combination of such experience and education at college level totaling at least five years. The code also controls the manner in which schools may advertise and solicit enrollments.

Proprietary Schools in Santa Clara County

Santa Clara County is located some 30 miles south of San Francisco, and most of its population of about 900,000 is located in the urban northern half of the county.

The introduction and expansion of electronics, aerospace, and research and development activities has transformed the economy of the area in the past decade from agricultural to technological industry. Today, all but one of the major employers are concerned with "space age" production.

Santa Clara County has three universities with an estimated enrollment of some 27,000; four junior colleges with about 11,500 students, and 42 high schools enrolling some 54,000.[9] Each junior college offers nontransferrable programs in a variety of occupational areas--business and office, health services, trade and technical, and public and personal services--and a check of class schedules showed 80 such courses in the four schools last semester.

In January 1966, we initiated research to determine the scope and extent of proprietary school vocational activity in Santa Clara County. Advertisements were screened, telephone and business directories were checked, and the resulting information on school offerings was compared with the listings of cognizant state agencies so that we could develop a comprehensive roster of proprietary schools in the county. We visited each school for the purposes of interviewing administrators, managers, and instructors and observing classes. The results were subsequently checked with field representatives of the State Bureau of Readjustment Education. The results of this survey developed information on 38 active proprietary schools and one correspondence school, all of which were offering programs that were occupationally oriented.

The breakdown below shows the distribution by occupational area.

	Number of Schools
Business and commercial	6
Health services	1
Real estate	6
Cosmetology	9
Barber	1
Trade and technical	8
Miscellaneous	7
Correspondence	1
	39

The trade and technical group includes schools with programs in radio and television repair, electronic assembly, offset printing, welding, auto mechanics, electronic technology, commercial driving, and drafting. Schools in the miscellaneous group offer programs for such diverse occupations as professional models, bartenders, cocktail waitresses, or masseurs. The health services school gives instruction for medical or dental assistants, and the correspondence school teaches piano tuning.

All of the 38 resident schools are located in the northern part of the county, and 28 were either in San Jose--by far the largest city in the county--or in contiguous communities. However, no school drew its students exclusively from the local community since all schools could easily be reached from any of the suburban areas of this part of the county.

These schools, with only two or three exceptions, share several common characteristics in their method of operation: (1) a variety and range of courses available with none requiring more than twelve months and a substantial number requiring less than six months to complete; (2) no requirement for high school graduation as a condition for enrollment (although two schools, both business colleges, did require nongraduates to pass a 12th grade equivalency test); and (3) operation on a year-round basis and, in most cases, acceptance of new students into classes within a week of enrollment.

Business and Commercial Schools

As of January 1966, the six business and commercial schools had a total enrollment of 470 students in various business and office courses. Recent junior college enrollment figures suggest the degree to which these proprietary schools compete with the public institutions in attracting students; in May 1965, there were 966 students enrolled in two-year terminal business education programs in the accounting, clerical, office operations, and general secretarial fields at the four junior colleges of the county.[9]

The proprietary business school courses usually call for 25 class hours per week in a full-time schedule; however, these schools are quite flexible so that they can accommodate those students who hold full or part-time jobs. All but one of the six schools have evening programs as well as day classes. The payment terms and schedule vary from school to school, but regardless of the pricing system used, a student could expect to pay from $100 to $125 per month and a total of from $225 up to $1,295, depending on the program selected. Most schools offer discounts for full payment in advance and provide financing arrangements for extended payment plans. Several typical programs are listed below to indicate the span of costs and time involved.

Executive secretarial	25 hours/week	9 months	$900
PBX-receptionist	25	3	298
General office clerk	25	9	650
IBM keypunch	15	2	225

Aside from the fact that about 90 percent of the students in these schools are women, the composition of the student body varies from school to school. For example, the school that provides the greatest variety of course offerings reported that about two-thirds of its students were in the 17- to 22-year age group with a background of general academic subjects in high school, little if any additional education, and no prior work experience in the field of study. Enrollment at two Palo Alto schools included a large number of students' wives, reflecting the influence of nearby Stanford University. Another school showed heavy summer enrollments of high school age students, presumably those who had just completed school, and sharp enrollment increases in February as "those who couldn't make it after a semester in college" turned to these business courses. All business schools indicated that their female students over 30 years old tended to enroll in the short-course programs or, in those cases of prior work experience, to take brush-up courses in secretarial skills.

On the basis of educational background and related employment experience, the quality of the faculty in these schools appears to be quite high. Each of the four full-time instructors at one school has a baccalaureate degree, a teaching credential from California or another state, more than a year of prior teaching experience in business subjects at the high school level, and at least three years experience as a secretary or bookkeeper. Similarly, all of the instructors at three other business schools have college degrees and have substantial teaching and employment experience. In another school, staff members who instruct skill courses only are high school graduates with usually less than a year of college but with from six to ten years employment experience in their instructional specialty--PBX, keypunch, teletype, etc.--and teaching experience in the proprietary school system. Finally, the instructional staff of the school with the widest selection of courses represents a mix of the two types described above: instructors in machine skills have a high school education and substantial work experience, and teachers of subjects such as accounting, business law, and business English hold college degrees with majors in the teaching field. Female instructors dominate the field. Only one school had equal numbers of male and female teachers, and four of the schools had no male instructors on the teaching staff at the time of this survey.

All but one school, a two-teacher activity, reported considerable turnover of instructional staff, on the order of one-third each year. Some of the losses came as instructors who had taken positions the previous year were hired into the public school system at the annual spring recruitment. School administrators attributed other losses to the fact that many of the female teachers were working wives who terminated as their husbands moved or the requirement for additional income was no longer a factor. School managers seeking replacements or additional instructors used teacher employment agencies, classified advertisements, college and university placement services, and word-of-mouth inquiries. There is apparently no shortage of instructors in this field. As one school manager put it, "there are plenty of teachers around but very few good ones, and we can't afford to have a poor teacher--the word spreads and our enrollment is affected. We screen about 25 applicants for every position vacancy that comes up."

These schools use a variety of methods to attract prospective students. All employ telephone directory advertising, and several maintain substantial schedules of classified newspaper advertising. While explicit or implicit statements regarding employment guarantees are prohibited by law, each school stresses its free placement service in the promotional literature that describes the course offerings. This service operates in much the same manner as a college placement office, receiving calls from prospective employers. In addition, school managers establish informal working relations with personnel departments of the major firms and institutions in the area to develop information on position vacancies.

Real Estate Schools

The six real estate schools each offer the real estate salesman's course and the real estate broker's course, both preparation programs for state licensing examinations. One of the requirements for state licensing as a real estate salesman is a written commitment by a licensed real estate broker to employ the candidate as a full-time salesman. Thus, individuals who take the preparation course for salesman's license will in almost all cases have an employment commitment. The real estate broker's course attracts persons active in the real estate business, since candidates for the real estate broker's license must be licensed real estate salesmen for at least two years and, among other things, must show evidence of completed sales that satisfy minimum criteria as to dollar amount and type of transaction.

All but one of these real estate schools is relatively new to the area; the oldest has operated in various locations in the north of the county since 1936, but the remaining five all started after 1960. Three of the real estate schools are operated in conjuncion with active real estate sales firms. The total enrollment of 380 students as of January 1966 included 330 in the salesman course and 50 in the broker course. Most of these students were attending the three schools with no real estate organization affiliation; each such school had more than 100 students enrolled.

The method of operation at each of the six schools is substantially the same. Courses for the salesman's license examination run from four to six weeks with lessons organized into independent instructional blocks. Thus, new students can be admitted at any time and remain until they have completed the course cycle. All but one school allows students to repeat classes or retake the entire course without additional charge, and one school guarantees that if students who follow its instructional program fail to pass the licensing examination, the cost of the course will be refunded.

A salesman's course costs from $50 to $75 and will include from 21 to 60 class hours of instruction, including sample examinations. Charges for the broker's course run slightly higher, from $65 to $95, and include from 26 to 74 class hours of instruction. Classes are available in the morning, afternoon, and evening and are usually scheduled two or three times a week.

Aside from the state licensing requirements that set 18 as the minimum age for a licensed salesman and 21 as the minimum age for a licensed broker, the schools have no prerequisites for admission other than the ability to read and write English. The range of student ages at the schools visited was wide--from 18 to 70--with the majority of the students in the 35 to 45 group. Approximately one-third of the students were housewives who saw real estate sales as a source of additional income, and approximately 10 percent of the students were of retirement age.

Instructors in all instances had extensive backgrounds in real estate as brokers, attorneys, or as teachers in real estate schools. Each school used the sample examination technique to prepare its students for the state licensing examinations and devoted up to one-third of the course in critiquing results of the sample examinations.

Students are attracted to real estate schools by telephone directory and classified newspaper advertising, Referrals from brokers and salesmen also provide a substantial number of applicants. January, February, and September are the peak enrollment months, while the summer months have extremely low enrollment. Several instructors in real estate schools observed that their enrollments have always been highest when unemployment rates were up and lay-offs and cutbacks occurred in the major industries of the county.

Cosmetology and Barber Schools

The nine cosmetology schools and one barber college together account for the largest proprietary vocational school enrollment in the county; as of January 1966, there were 589 cosmetology students and 65 student barbers attending these schools. The applicable state examining board licenses the school, instructors, and students; establishes student-teacher ratios; sets minimum standards for space and equipment; and prescribes the curriculum in considerable detail. Except for a handful who are taking brushup courses, all of the above students are in programs to satisfy the educational requirements of the state licensing authority and to become eligible to sit for the licensing examination. The courses and enrollments are listed below:

Cosmetologist	1,600 hours in 9 months	569 students
Manicurist	350 hours in 3 months	2
Teacher training	600 hours in 4 months	10
Brushup	As required	8
Barber	1,248 hours in 12 months	65

Although there is no minimum enrollment age, state licensing regulations operate to govern student admission requirements. The applicant for licensing as a cosmetologist or manicurist must not be younger than 18, and in addition to having completed the prescribed course of study, must have either completed the 10th grade or pass an equivalency test. The applicant for licensing as an instructor must not be younger than 21, must be licensed as a cosmetologist, and must either have completed the prescribed teacher training course or have a minimum of one year of practical experience in all fields of cosmetology.

A barber college graduate who applies for examination to practice as a registered apprentice must be a least 17-1/2 years of age and must have completed the 9th grade or pass an equivalency test. Instructors must be registered journeyman barbers, have at least two years experience at that level, have completed the 12th grade or pass an equivalency test, and pass the state examination for instructor registration.

In every cosmetology school, more than 80 percent of the full-time students were girls younger than 21. None of the schools had established an upper age limit, but managers and directors of instruction agreed that students over 50 did not have the dexterity or stamina for shop work and they discouraged persons in this age group from enrolling. Only one of the cosmetology schools offers a part-time instruction program, providing evening classes in addition to the regular day schedule. Most of the students in the part-time program are employed or attending school; they are in the 25 to 30 age range and, unlike the day students, about evenly distributed as to sex. The barber college permits students to schedule either full- or part-time programs during the day. With full-time attendance of 48 hours per week, a student can complete the course in 26 weeks. Most students, however, take less demanding programs and complete the program in about nine months. Approximately 75 percent of the students enrolled are under 23; the remainder include all ages up to the mid-50s.

The cosmetology and barber schools maintain an informal free placement service for students who receive their licenses. Inquiries from salons or shops for personnel are answered, informed of recent graduates, and the students are told of the referral. Some schools use a bulletin board system for posting all inquiries. Placement appeared to pose no problem, either for cosmetologists or barbers, and informal inquiries in the trade indicate that there is considerable employee turnover, particularly in cosmetology, as young women leave to get married or move to another location.

Because of the uniformity of cosmetology school programs, one would expect course prices to be highly competitive. However, this is far from the case. The 1,600 hour cosmetology course can be taken at three schools for as little as $300, but one school charges $600 for the same course. The most expensive school competes with three other schools within a half-mile, yet it has an enrollment in this course that equals the total enrollment of the other three nearby schools where tuition is under $500. Whether students in selecting a school tend to equate course cost with quality of instruction cannot be determined although there is some indication that this is the case. For example, one school proprietor stated that she had offered "cut-rate" specials on enrollments from time to time but had little response; however, when she raised the basic tuition charge, the enrollments increased.

Medical and Dental Assistant Schools

Although career programs in medical or dental assisting are available at the two largest public junior colleges in the county, a large proprietary school for dental and medical assistants has not lacked for students since it opened in 1964. A unit of a four-school chain in Northern California, this school offers a seven-month medical assistant course for $525 with both day and evening classes available and a four-month dental assistant course for $295 with day classes only.

The school catalogue makes no mention of educational or age requirements for enrollment. The school director said that high school graudates were preferred, but this requirement is waived in the case of mature applicants. Students from 17 to 50 years old are accepted; new students can be added to the medical assistant program every eight weeks, and enrollments in the dental assistant course are restricted to the beginning of a new class each four months.

The instructional staff consists of two medical assistant instructors, one for day and one for night classes, who are both registered nurses and one dental assistant instructor with ten years working experience and five years as an instructor in this school chain. On completion of the course, students work for two weeks as an "interne" in an office of a cooperating doctor or dentist. The school reports a dropout rate of less than 5 percent since opening, and the director said that many of these losses were temporary since students tend to return to complete their course work.

Enrollments in February 1966 totalled 50 students in the medical assistant course and 60 in the dental assistant course. In comparison, in May 1965, San Jose City College had 38 students in its two-year medical assistant course and 39 in the dental assistant program, and Foothill Junior College had 60 in the medical assistant course and 50 in the dental assistant course.

Trade and Technical Schools

Trade and technical programs are given at two welding schools; two automotive institutes; two schools with radio-television repair courses, as well as other subjects; a drafting school; a driver training institute; and an electronics maintenance school.

One welding school operates as an adjunct to a job shop with the proprietor and his assistant serving as instructors. The other is exclusively an instructional facility with a manager and two instructors. This school has been in operation since 1961 and offers three programs: (1) an eight-month day course designed for Indian students sponsored by the Bureau of Indian Affairs; (2) a six-month day course that is a modified version of the Indian student program; and (3) several evening courses in inert gas welding, electric welding, and similar subjects for individuals seeking to upgrade their skills. The former school has four courses in subjects such as microwire welding, acetylene gas welding, inert gas welding, and manual arc welding that call for from 84 to 148 hours of instruction and total 534 hours if taken as a complete instructional package.

Both schools accept students between the ages of 18 and 45. They require good physical condition and eyesight but no physical examination. No specific educational background is necessary, and the instructors determine student aptitude for this type of work by observation during the early stages of the program. Since instruction is conducted on an individual basis, students are accepted for enrollment at any time.

Of all the proprietary school course offerings in the county, the welding courses are the most costly to the student. The use of expensive materials in practical work instruction places the charge per class hour for some courses in the $4-$6 range, and school proprietors admit that this is usually beyond the reach of a student who is not sponsored by a government agency or by local industry. Employment prospects for qualified welders, particularly those who can work with stainless steel or aluminum, are good, and an inside shop man could expect to earn from $3.50 to $4 per hour in the local area.

Similarity between the course offerings at the two automotive schools is not coincidence; the owner and manager of one school was formerly an instructor at the other. One school alternates seven-week courses of 280 hours in automatic transmission repair and in automotive tuneup throughout the year. The other offers the transmission course on an evening schedule and alternates a daytime seven-week tuneup course (280 hours) with a four-week brake repair and wheel aligning course (160 hours). Concurrently, an eleven-week general mechanics course (440 hours) is offered. Both schools price their programs at $2.50 per class hour.

Admission policies at both schools call for successful completion of the Bennet Mechanical Comprehension Test. One accepts an 8th grade education, and the other asks for 9th grade completion as a minimum. Incidentally, these two schools were the only institutions surveyed that used a formal aptitude test to screen every applicant for admission.

At the time these schools were visited, one had seven students (all sponsored either by the Veterans Administration or the state rehabilitation agency) enrolled in the tune-up course. The students ranged in age from 23 to 41 and were classified as handicapped persons by the sponsoring agencies. The other school had fifteen students enrolled in the tune-up course and five in the general mechanics course; seven of these were similarly sponsored. Student ages ranged from 18 to more than 50.

One of the two "trade schools" surveyed offers evening courses to prepare students for 1st and 2nd Class FCC licenses and for entry level employment as an electronic technician or a radio and television repairman. All classes are scheduled on a three hour per night, three night per week basis, and the FCC license courses vary in length according to the background in electronics of the student. The technician-repairman course is scheduled for a year; however, the curriculum design permits students to take only those increments that are directly related to their employment objective.

Students are accepted from 16 years of age for enrollment, and the 17 students who were attending classes at the time of the survey ranged from 16 to 40 years of age. There are no educational prerequisites for any of the courses, but prospective students are informed that without a high school diploma, employment opportunities will be limited even though the students complete the course and receive a certificate to that effect. If employment in industry rather than work in a repair or service shop is the objective of a prospective student, the school holds the upper age for enrollment at 40.

At the time of the survey, there were six students enrolled in the FCC 2nd Class license course and eleven in the radio-television-electronics course. Four students were sponsored by their employers, and the remainder were paying their own tuition. Tuition arrangements at this school were unusual in that all programs were priced at $1 per class hour on a pay-as-you-go basis, and students were not committed at enrollment to complete a specified program of class hours.

The school manager, whose background includes more than 13 years experience with a major airline as training supervisor, stated that since this was an evening school, he had little difficulty in obtaining qualified instructors. He observed that his last advertisement for a replacement instructor produced 30 applicants, all of whom were employed in the field and considered a teaching position as an ideal opportunity to "moonlight." The three instructors currently on the staff are all employed full-time in research and development programs in the local electronics industry.

Aside from company-sponsored students, the school attracts two distinct groups of individuals. One group consists of young men, usually under 23 years of age, who have had some high school and have been or are employed in a low-skill capacity. They seek this training to qualify them for positions in the electronics and aerospace industry. The other group consists of employed men in their upper 30s or early 40s who look to the training as preparation for an occupation that is less demanding physically than their present employment.

The other "trade school" offers a somewhat similar course in radio and television servicing and repair, a short course in electronic assembly, and a graphic arts program in offset printing. This latter course uses the facilities of a small job shop that is adjacent to the school and owned by the school manager.

The admission policy for students is flexible, and acceptance or rejection of a prospective student is based on the manager's knowledge of requirements of the employment market and the objectives of the student. Students at this school generally are in the 25-30 age group and in most cases have had no prior experience in the course subject area. Both men and women are enrolled in the electronic assembly course, and classes have tended to be about evenly divided.

Although this school offers both day and evening programs, the major enrollment is in night classes. Of the 24 students on the school rolls at the time of the survey, 17 were in the night radio-television repair class. A variety of schedules are available; for example, there are three radio and television repair programs--one of 25 weeks' duration at 30 hours per week for $795, one of 25 weeks' duration at 15 hours per week for $445, and the night course of 50 weeks' duration at 6 hours per week for $10 per week. The electronic assembly course has no fixed time schedule; however, the school manager estimated that day students would complete the course in four to six weeks. The graphic arts program is broken down into a press element (8 weeks at 30 hours per week for $540) and a camera element (4 weeks at 30 hours per week for $270).

This school has had as many as seven instructors (full- and part-time), but, at present, classes are taught by the school manager and one instructor with a background of more than 30 years in radio servicing. In the event that part-time enrollments increase, two technicians employed in the electronics industry can be called on to augment the staff. The manager of the school stated that he has had difficulty in finding individuals with shop experience who are also qualified and willing to instruct classes according to the school's lesson plans.

The school provides placement assistance and has canvassed potential employers regarding job availability for course graduates. The manager stated that about half of the graduates in radio and television servicing found employment in the electronic industry, and the remainder took work in service shops. He estimated that 95 percent of the graduates of the electronic assembly course were employed in local plants, which appears reasonable in view of the shortage of personnel for this type of bench work in the local area.

The one drafting school in the county has been in operation for a year, offering evening classes in basic and intermediate drafting to prepare students for entry level employment as draftsmen. This is a one-man activity with classes limited to a maximum of 20 students. Individual instruction is given by the school owner who is employed as a design draftsman specialist by a local aerospace organization.

There are no education or drafting experience prerequisites for enrollment; however, students under 18 years of age are accepted only with the approval of their parents. All students pay one month's tuition ($32) in advance and are accepted on a trial basis, permitting the instructor to determine whether the student has an aptitude for drafting and the student to determine whether the drafting field has appeal. If students leave at this time, their advance tuition payment is refunded.

Two evening classes of three hours each are held each week, and two courses are offered: mechanical drafting (12 months) and electronics drafting (9 months). The $32 per month charge applies to both courses. Since the instruction is individual, new students can enroll at any time. All eleven students in the present class are employed; their occupations include utility crewman, bank clerk, service station attendant, assembly line supervisor, and ambulance driver.

Although quarters are modest, the school is well equipped and the students use a current college-level text for drawing problems. The instructor grades all projects and provides the student with an analysis of the grade score; three-hour written examinations are scheduled about every six weeks and each phase of the course--basic, intermediate, and advance--carries a final written examination. Students who fail to do at least C+ work or have a record of absences or tardiness are interviewed by the manager and urged to drop out of the program. This new school has not graduated any students; however, several aerospace firms familiar with the work of the school manager have expressed an interest in interviewing those graduates that he might recommend as above average students.

The driving school is a franchised activity that offers resident instruction for noncommercial drivers and accepts applications for commercial driver training, which is conducted at an affiliated school in San Francisco. In the past year, six persons from the local area have enrolled in the course and completed the 90-hour training program in San Francisco, taking classes in the evenings and practical driving work on various types of equipment on Saturdays. All have been employed persons seeking a change in occupation.

There are no educational requirements for enrollment; however, the student must be able to qualify for a state operator's license on completion of the course and must obtain a learner's permit before entering the phase of training that involves vehicle operation. Applicants who are under 23 years of age are discouraged from enrolling, since the high insurance premiums for drivers in this age group almost precludes their employment after obtaining a license.

Philco Technical Institute, an activity of the Techrep Division of the Philco Corporation, has operated in the county since 1963 and offers a 72-week (1,800 class hours) course in electronics maintenance with emphasis on computer, radar, and communications equipment maintenance. This school has not up to this time offered training programs to the general public; all students are Indian youths, sponsored by the Bureau of Indian Affairs, from reservations west of the Mississippi River. Screening and selection of applicants is performed by the Bureau of Indian Affairs.

The course is skill-oriented with laboratory periods introduced in the second quarter of the six-quarter program to provide a 3-to-2 lecture-lab ratio for the remainder of the program. The typical instructor is in his early 30s, has two to three years of college-level education in electronics, and has a minimum of five years of related instructional experience as a technical representative or in the military service. The present staff of four instructors serves two class groups, one of 16 students that will graduate in August 1966 and another of 29 students that will graduate in January 1967. The initial student enrollment in these two class groups was 30 and 37 students, respectively. The attrition rates in these two class groups are attributed by school officials primarily to lack of student interest despite indicated aptitude in the screening tests--such students tended to transfer to other programs such as welding that were available in the area--or to student fear of failure in course work, often despite average or above average academic performance.

The school has been successful in placing its graduates throughout the industry, for notwithstanding its affiliation, the school does not function as a manpower development resource for the Philco organization. All members of the first class to complete the program were employed in their specialty within a month after graduating, and most had firm job commitments 60 days before their course ended. A follow-up study of this group showed all but one individual continuing in the field, and half of these former students were still with the original hiring organization.

Special Interest Schools

Several of the resident proprietary schools not only present unusual programs without counterparts in the county array of public schools, but also represent unique situations in terms of admission criteria, instructional staff, and student enrollment. According to its owner and manager, the objective of a massage school was to "train individuals for the field of massage to the end that they have the ability to give a massage and know what they are doing, and to develop membership for the American Massage and Therapy Association." This involves a 1,000-hour course; however, only 200 hours of this program are devoted to class work. The remainder are taken as home study in subjects such as basic anatomy (200 hours) and basic physiology (200 hours), with applicable volumes of the Barnes and Noble College Outline Series as texts.

There are no educational prerequisites for admission, and both male and female students are accepted. Applicants over 30 are preferred and those under 25 are not encouraged to enroll. The prospective student must provide three character references and be cleared by the local police. There is no tuition charge for the course; however, the student who is accepted pays a $25 fee for application processing and a police permit and further agrees that on completion of the course he will become a member of the American Massage and Therapy Association at a fee of $44.

The school, which began in 1958, is operated in conjunction with a commercial massage parlor. Classes are held in the evening after regular business hours, using all of the rooms and facilities of the building. Some 22 students were enrolled at the time school was visited, and instruction in massage techniques was conducted by the school manager and his wife with assistance from time to time by others also employed in the massage field. Advanced students sometimes assist in the work on paying customers at the establishment. The present student class was described as being in the middle and upper age ranges and all were currently employed--the manager mentioned having a minister, a public relations man, an attorney, and several school teachers in this class.

The manager and his wife have been self-employed in the massage field for about ten years and both are members of the American Massage and Therapy Association. The manager holds a "Diploma of Naturotherapy," a "Diploma of Osteopathy," and a certificate from the Anglo-American Institute of Drugless Therapy. He also serves the California chapter of the massage and therapy association as lobbyist in the state capitol.

Since the students are required to join the therapist's association on completion of the course, that organization would be available for assistance in obtaining employment. On the other hand, the school manager stated that there was no pressure to enter this field of work, and he felt that employed individuals such as those in the current class "probably were taking the training to have something to fall back on." The school could not provide information on the employment status of former students, but some were hired from time to time to augment the permanent staff of the massage parlor associated with the school.

A bartenders' school trains both bartenders and cocktail waitresses in a classroom setting that is a replica of a typical tavern with a bar stocked with a full array of glassware, mixers, and bottles filled with colored liquids to simulate the original contents, both as to color and specific gravity. During the six-week bartender course, which costs $200, students learn to mix at least 100 different cocktails or other mixed drinks. The cocktail waitress course of three weeks, for a $100 tuition, concentrates on practical work in taking and serving orders. Students in both courses must be at least 21 years old to qualify for employment on completion of the course. A maximum of eight students can be accommodated at any given time; there were five enrolled at the time of the survey visit.

Three "charm schools" offer modeling programs. However, students are not admitted directly to this course but must first complete the five to six-month program of self-improvement courses that attract most students to these schools.

One school manager stated that her experience indicated that perhaps 15 to 20 percent of the students who enroll in the school considered careers in modeling. At the time of this survey, 20 of the 75 students enrolled in her school were either in the modeling course or had indicated a desire to take this course on completion of the basic self-improvement course. Another school reported 155 active enrollments with 30 of these students in a modeling instruction program. All school directors agreed that few students enrolled with the specific objective of receiving training for a career in modeling. As one manager put it, "they drift into modeling after they've been with us a while and begin to realize their potential."

Analysis of Exploratory Survey

Although some proprietary schools operate in vocational areas that, at least up to this time, are outside the fields of interest of public education, a considerable number of the courses concern subjects and instruction also available in the public education system, either in evening adult education programs or in the junior colleges. Since most students in the proprietary schools could meet the admission requirements of these public institutions, one might ask why an individual would invest several hundred dollars for a course that is available at no charge in a public school.

What appeals do these proprietary schools hold for their students, particularly those young persons who are in the junior college age group? In this exploratory survey, informal interviews were held whenever possible with one or several students at each of the schools. We do not suggest that information and opinions obtained in this approach are conclusive evidence of prevailing attitudes regarding vocational education offerings. However, we do believe that the unanimity of opinion expressed on certain areas and interests warrants serious consideration for a more rigorous and comprehensive investigation of student attitudes toward vocational programs.

Course content and time were two of the three factors mentioned most frequently by these students in explaining their decision to enroll in a proprietary school program. Time is an important consideration in both course length and facility of enrollment. Students mentioned that when they had reached a decision to take a course, they could begin classes either at once or at least within one or two weeks. There were no scheduling problems to cope with, and registration was a simple matter that involved only signing a contract and arranging for payment. Course length is directly related to course content. As a recent high school graduate who was talking a secretarial course explained, "Here, I don't have to bother with English composition, physical education, history, or science; I spend all of my time on business courses, and after all, that's what I need to learn to get a job." This point was made repeatedly by students in every type of vocational program. They expressed the feeling that the nonvocational subject requirements of public schools served only "to drag out the time" and made no contribution to development of their skills. Several business college, cosmetology, and medical and dental assistant students, although admitting that the course costs represented a substantial financial outlay, pointed out that they could complete the course and recover their investment through earnings within a year after enrolling in the program, while their counterparts in junior college would still have to attend school another year.

The third factor that students mentioned as influencing their decision to attend a proprietary school was placement service. Students felt that these schools would make every effort to obtain employment for their graduates, believing that the school's continuation as a commercial enterprise would depend on the degree to which its students were successful in securing employment after training. Students also had the impression that these schools maintained close relations with potential employers and represented a channel to job opportunities not elsewhere available. When the role of the vocational counselor in public schools was discussed in student interviews, they observed that the guidance was general and concerned more with qualifications for employment rather than employment leads. This student misconception of the role of the counselor is reinforced because "counseling" in the proprietary school does include reference to specific job opportunities.

Students also commented on the individual attention that they received and the relaxed classroom atmosphere. Some students remarked that they felt free to ask questions since they were no longer threatened by the scorn of the instructor or the ridicule of classmates as had been their experience in high school.

Although the physical facilities in most schools were not as good as those of public schools, none of the students interviewed mentioned this in our discussions. They did, however, feel that their instructors were more closely related to and aware of conditions in the world of work than instructors in public schools. Further inquiries on this subject usually brought forth the fact that the student was comparing his present vocational instructor with academic subject instructors from his high school; nevertheless, he would usually reaffirm an opinion regarding the "impracticality" of his educational experience in the public school.

Areas for Further Investigation

In highlighting promising areas for further investigation, most of our comments stem from personal concern with the public policy aspects of vocational education. Therefore, most of the suggestions for future research concern the contribution of proprietary schools to a community's total vocational education effort.

One of the highest priority items for future research is a detailed descriptive study of proprietary schools on a much broader scale than ours. At the least, such a study should encompass an area justifiable as a relatively independent economic system, such as the greater San Francisco Bay Area or the four-parish New Orleans area. Such a study seems justified on the basis of our study and the limited information available from other sources. It would provide essential context for developing questions, the answers to which have relevance to education or manpower policy. The remainder of our paper attempts to anticipate some of the kinds of questions that would emerge from such a study.

First, how effective are proprietary schools in preparing students for employment and in actually getting them jobs? Our study provides fragmentary data indicating that the majority of students from certain schools find immediate employment in jobs directly related to their training. In the case of certain of the schools we studied, such as the chain business schools, one could infer that reasonable success in placement was a prerequisite to remaining a profitable enterprise over a long period of time. However, more systematic evidence is required before question can be answered.

How do school age students in proprietary school vocational programs compare with their counterparts in similar programs in the public schools? What, for example, are the levels of aspiration of the two student groups? At what point in their academic career did those students decide to pursue a vocational objective? What factors influenced this decision by each of the student groups? What leads some students to regard the proprietary school as a more congenial climate in which to learn? How do they justify the proprietary school cost that would not be required in public schools? What are the consequences to the proprietary school students of not being exposed to the liberal arts courses that they might take in a public school vocational curriculum? What has been the public school experience of those students who turn to proprietary education?

Attention should also be directed to questions concerning the supply and demand for vocational teachers. How and from where, for example, do proprietary schools recruit their teachers? How do proprietary teachers vary in terms of job satisfaction, general working conditions, community status, salary and fringe benefits, when compared with public school vocational teachers? How many teachers serve both public and proprietary schools?

Many questions of significance center around the proprietary schools as an institution. What is the effectiveness of proprietary schools compared with public schools in gearing up quickly to provide training to meet critical labor requirements, in using the most modern and effective teaching devices and procedures, and in the efficiency (cost vs benefit) with which they prepare students for jobs? What manner of entrepeneur is involved with proprietary schools, and how much money does he make (or lose)? From where does his financing come? How long, on the average, does the proprietary school remain in business? And for all these questions, it is important to know the variation by type of proprietary school.

Another set of questions concerns the way in which the community views the proprietary schools. How, for example, does the employer view the product of such schools, particularly as compared with other workers trained by different schools or in-plant? How do public school administrators, teachers, and counselors view the proprietary system of education? How do parents view proprietary schools and how does this influence advice given to their children?

Finally, do the proprietary schools represent a potential for expansion of the public school vocational programs, particularly in areas of short term need or modest student demand, through some arrangement such as now operates in those cases where students in proprietary schools are sponsored by state or federal agencies?

While our exploratory study of proprietary schools has merely scratched the surface of the situation in one California county, we hope it stimulates interest in what appears to be a neglected aspect of research on vocational education. On the basis of enrollment data, it appears that proprietary schools may be making a more substantial contribution than had been suspected in instructional areas that are also in the public school domain. It also seems clear that in terms of numbers of schools, courses, teachers, and students, proprietary vocational education represents a significant portion of the total vocational offerings in a community. Other information in various directories, although incomplete, indicates that this holds for the country as a whole.

NOTES AND REFERENCES

1. The use of the term "vocational education" in this paper follows the definition in Report of the Panel of Consultants on Vocational Education, Education for a Changing World of Work, Government Printing Office, Washington, D.C., OE-80021, 1964. This definition is that vocational education includes "all formal instruction for both youth and adults, at the high school, post high school, and out-of-school levels, which prepares individuals for initial entry into and advancement within an occupation or group of related occupations." Education leading directly to a baccalaureate or professional degree is excluded. The term "proprietary vocational school" refers to a profitmaking school offering a course of education or training that leads to a vocational objective.

2. The section of Johnstone and Rivera's substantial work on adult education, Volunteers for Learning, NORC, 1965, that deals with educational facilities and programs in two middle sized cities includes the observation that "proprietary schools represent an extremely important segment of the educational resources used by adults in these cities," and notes that more adults took courses in such schools than did so in the local secondary schools, colleges, and universities. However, this work focuses on adults and considers persons under 21 years of age only when they are married or heads of households.

3. The Vocational Training Directory of the United States, Potomac Press, Arlington, Virginia, listed more than 7,000 schools in the 1958 edition; however, the compilation was admittedly incomplete, and a check of its listings indicated that a number of schools known to be operating in Santa Clara County at that time were not included.

4. United Business Schools Association, The 1966 UBSA Directory of Business Schools, Washington, D.C., 1966.

5. Encyclopedia of Associations, Vol. 1: National Organizations of the United States, Gale Research Co., Detroit, 1964.

6. Ridgeway, James, "The Girls in White," The New Republic, February 19, 1966, pp. 10-12.

7. California State Department of Education, Courses Offered by California Private Schools, Sacramento, California, July 1965.

8. These criteria are set forth in considerable detail in Division 21, Private Educational Institutions, of the California Education Code. Provisions for cosmetology and barber colleges are contained in the rules and regulations of the State Board of Cosmetology and the State Board of Barber Examiners.

9. Santa Clara County Office of Education, Occupational Needs and Their Educational Implications for Schools and Colleges in Santa Clara County, San Jose, California, 1965.

Appendix C

INSTRUCTIONAL PERSONNEL INVENTORY TABLES

Table C-1

NUMBER AND AGE OF TEACHERS, BY SCH

Respondents by Age, Sex,

	20-24		25-29		30-34		35-39		40-44		45-49	
	M	F	M	F	M	F	M	F	M	F	M	F
	32	90	209	181	238	67	240	60	174	61	106	62
	1.9%	5.3%	12.4%	10.7%	14.1%	4.0%	14.2%	3.6%	10.3%	3.6%	6.3%	3.7%
High school district												
Campbell	4	16	12	24	24	4	14	4	8	6	5	3
	3.0	12.0	9.0	18.0	18.0	3.0	10.5	3.0	6.0	4.5	3.8	2.3
East Side	6	16	63	27	38	7	26	6	11	3	7	6
	2.7	7.1	28.0	12.0	16.9	3.1	11.6	2.7	4.9	1.3	3.1	2.7
Fremont	9	16	30	32	37	13	37	10	19	11	11	11
	3.4	6.1	11.5	12.3	14.2	5.0	14.2	3.8	7.3	4.2	4.2	4.2
Gilroy	1	2	6	5	7	1	8	1	6	1	0	0
	2.2	4.4	13.3	11.1	15.6	2.2	17.8	2.2	13.3	2.2	.0	.0
Los Gatos-Saratoga	2	4	6	9	13	5	13	2	11	1	5	2
	2.3	4.6	6.9	10.3	14.9	5.7	14.9	2.3	12.6	1.1	5.7	2.3
Mountain View-Los Altos	1	6	10	12	13	3	4	3	9	2	4	4
	1.3	7.9	13.2	15.8	17.1	3.9	5.3	3.9	11.8	2.6	5.3	5.3
Santa Clara	4	10	22	16	19	5	13	3	3	1	2	2
	3.7	9.3	20.4	14.8	17.6	4.6	12.0	2.8	2.8	.9	1.9	1.9
Palo Alto Unified	3	8	8	13	12	3	15	8	18	15	21	9
	2.0	5.3	5.3	8.7	8.0	2.0	10.0	5.3	12.0	10.0	14.0	6.0
San Jose Unified	2	9	14	20	14	6	16	5	12	6	8	5
	1.4	6.5	10.1	14.5	10.1	4.3	11.6	3.6	8.7	4.3	5.8	3.6
Subtotal	32	87	171	158	177	47	146	42	97	46	63	42
	2.6%	7.1%	14.0%	12.9%	14.5%	3.8%	11.9%	3.4%	7.9%	3.8%	5.2%	3.4%
Junior college district												
Foothill	0	0	22	10	24	12	46	8	37	8	18	7
	.0	.0	10.7	4.9	11.7	5.8	22.3	3.9	18.0	3.9	8.7	3.4
Gavilan	0	0	0	0	3	0	4	3	2	1	0	0
	.0	.0	.0	.0	18.8	.0	25.0	18.8	12.5	6.3	.0	.0
San Jose	0	1	7	8	20	6	29	5	28	5	16	7
	.0	.6	4.3	4.9	12.3	3.7	17.9	3.1	17.3	3.1	9.9	4.3
West Valley	0	2	9	5	14	2	15	2	10	1	9	6
	.0	2.5	11.1	6.2	17.3	2.5	18.5	2.5	12.3	1.2	11.1	7.4
Subtotal	0	3	38	23	61	20	94	18	77	15	43	20
	.0%	.6%	8.2%	4.9%	13.1%	4.3%	20.2%	3.9%	16.6%	3.2%	9.2%	4.3%

le C-1

BY SCHOOL DISTRICT AND BY SEX

ge, Sex, and Number

45-49		50-54		55-59		60-64		65-69		69+		No Answer	TOTAL		COMBINED TOTAL
	F	M	F	M	F	M	F	M	F	M	F		M	F	
6	62	57	42	29	22	11	5	2	0	0	0	0	1,098	590	1,688
3%	3.7%	3.4%	2.5%	1.7%	1.3%	0.7%	0.3%	0.1%	0.0	0.0	0.0	0.0	65.0%	35.0%	
5	3	4	2	2	1	0	0	0	0	0	0	0	73	60	133
8	2.3	3.0	1.5	1.5	.8	.0	.0	.0	.0	.0	.0	.0	54.9%	45.1%	
7	6	3	2	2	1	1	0	0	0	0	0	0	157	68	225
1	2.7	1.3	.9	.9	.4	.4	.0	.0	.0	.0	.0	.0	69.8%	30.2%	
1	11	5	10	5	3	0	2	0	0	0	0	0	153	108	261
2	4.2	1.9	3.8	1.9	1.1	.0	.8	.0	.0	.0	.0	.0	58.6%	41.4%	
0	0	4	2	1	0	0	0	0	0	0	0	0	33	12	45
0	.0	8.9	4.4	2.2	.0	.0	.0	.0	.0	.0	.0	.0	73.3%	26.7%	
5	2	4	5	2	3	0	0	0	0	0	0	0	56	31	87
7	2.3	4.6	5.7	2.3	3.4	.0	.0	.0	.0	.0	.0	.0	64.4%	35.6%	
4	4	0	1	1	1	1	0	1	0	0	0	0	44	32	76
3	5.3	.0	1.3	1.3	1.3	1.3	.0	1.3	.0	.0	.0	.0	57.9%	42.1%	
2	2	3	4	0	0	0	1	0	0	0	0	0	66	42	108
9	1.9	2.8	3.7	.0	.0	.0	.9	.0	.0	.0	.0	.0	61.1%	38.9%	
1	9	4	5	4	1	2	0	1	0	0	0	0	88	62	150
0	6.0	2.7	3.3	2.7	.7	1.3	.0	.7	.0	.0	.0	.0	58.7%	41.3%	
8	5	4	3	4	5	3	2	0	0	0	0	0	77	61	138
8	3.6	2.9	2.2	2.9	3.6	2.2	1.4	.0	.0	.0	.0	.0	55.8%	44.2%	
3	42	31	34	21	15	7	5	2	0	0	0	0	747	476	1,223
2%	3.4%	2.5%	2.8%	1.7%	1.2%	.6%	.4%	.2%	.0	.0	.0	.0	61.1%	38.9%	
8	7	9	1	2	1	1	0	0	0	0	0	0	159	47	206
7	3.4	4.4	.5	1.0	.5	.5	.0	.0	.0	.0	.0	.0	77.2%	22.8%	
0	0	1	0	0	2	0	0	0	0	0	0	0	10	6	16
0	.0	6.3	.0	.0	12.5	.0	.0	.0	.0	.0	.0	.0	62.5%	37.5%	
6	7	13	5	6	3	3	0	0	0	0	0	0	122	40	162
9	4.3	8.0	3.1	3.7	1.9	1.9	.0	.0	.0	.0	.0	.0	75.3%	24.7%	
9	6	3	2	0	1	0	0	0	0	0	0	0	60	21	81
1	7.4	3.7	2.5	.0	1.2	.0	.0	.0	.0	.0	.0	.0	74.1%	25.9%	
3	20	26	8	8	7	4	0	0	0	0	0	0	351	114	465
2%	4.3%	5.6%	1.7%	1.7%	1.5%	.9%	.0	.0	.0	.0	.0	.0	75.5%	24.5%	

Table C-2

AGE LEVEL AND SEX OF RESPONDENT TEACHERS, BY PRIMARY OF INSTRUCTION AND BY SCHOOL LEVEL

	Respondents by Age, Sex, and Number															
	20-24		25-29		30-34		35-39		40-44		45-49		50-54		55-59	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	32 1.9%	90 5.3%	209 12.4%	181 10.7%	238 14.1%	67 4.0%	240 14.2%	60 3.6%	174 10.3%	61 3.6%	106 6.3%	62 3.7%	57 3.4%	42 2.5%	29 1.7%	22 1.3%
Area of Instruction																
General education subjects																
High school	28 2.7	75 7.2	141 13.5	143 13.7	143 13.7	43 4.1	123 11.8	35 3.4	84 8.0	42 4.0	49 4.7	37 3.5	24 2.3	30 2.9	19 1.8	14 1.3
Junior college	0 .0	3 1.0	28 9.2	20 6.6	44 14.5	12 3.9	59 19.4	16 5.3	52 17.1	7 2.3	20 6.6	13 4.3	16 5.3	4 1.3	3 1.0	6 2.0
Agriculture																
High School	0 .0	0 .0	1 16.7	0 .0	2 33.3	0 .0	0 .0	0 .0	3 50.0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0
Junior college	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --
Graphic arts																
High school	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --
Junior college	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --
Business and office education																
High school	2 2.1	12 12.4	11 11.3	15 15.5	16 16.5	4 4.1	8 8.2	6 6.2	4 4.1	4 4.1	6 6.2	4 4.1	0 .0	4 4.1	0 .0	1 1.0
Junior college	0 .0	0 .0	6 9.2	1 1.5	9 13.8	5 7.7	11 16.9	1 1.5	11 16.9	2 3.1	9 13.8	2 3.1	3 4.6	1 1.5	2 3.1	1 1.5
Health services																
High school	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --
Junior college	0 .0	0 .0	2 9.1	2 9.1	0 .0	3 13.6	0 .0	1 4.5	0 .0	5 22.7	1 4.5	5 22.7	0 .0	3 13.6	0 .0	0 .0
Industrial arts																
High school	2 2.8	0 .0	18 25.4	0 .0	16 22.5	0 .0	15 21.1	0 .0	6 8.5	0 .0	7 9.9	0 .0	6 8.5	0 .0	1 1.4	0 .0
Junior college	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --
Trade and technical																
High school	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --
Junior college	0 .0	0 .0	2 3.0	0 .0	8 12.1	0 .0	20 30.3	0 .0	12 18.2	0 .0	13 19.7	0 .0	6 9.1	0 .0	3 4.5	0 .0
Public/personal services																
High school	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --
Junior college	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	4 50.0	0 .0	2 25.0	1 12.5	0 .0	0 .0	1 12.5	0 .0	0 .0	0 .0
No answer																
High school	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	1. 20.0	0 .0	0 .0	1 20.0	1 20.0	1 20.0	0 .0	1 20.0	0 .0

SECTION 2

Table C-2

LEVEL AND SEX OF RESPONDENT TEACHERS, BY PRIMARY AREA OF INSTRUCTION AND BY SCHOOL LEVEL

	Respondents by Age, Sex, and Number																					
4	35-39		40-44		45-49		50-54		55-59		60-64		65-69		69+		No Answer	Total		Combined Total
F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		M	F	
67 .0%	240 14.2%	60 3.6%	174 10.3%	61 3.6%	106 6.3%	62 3.7%	57 3.4%	42 2.5%	29 1.7%	22 1.3%	11 .7%	5 .3%	2 .1%	0 .0	0 .0	0 .0	0 .0	1,098 65.0%	590 35.0%	1,688
43 .1	123 11.8	35 3.4	84 8.0	42 4.0	49 4.7	37 3.5	24 2.3	30 2.9	19 1.8	14 1.3	7 .7	5 .5	2 .2	0 .0	0 .0	0 .0	0 .0	620 59.4%	424 40.6%	1,044
12 .9	59 19.4	16 5.3	52 17.1	7 2.3	20 6.6	13 4.3	16 5.3	4 1.3	3 1.0	6 2.0	1 .3	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	223 73.4%	81 26.6%	304
0 .0	0 .0	0 .0	3 50.0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	6 100%	0	6
0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --			
0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --			
0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --			
4 .1	8 8.2	6 6.2	4 4.1	4 4.1	6 6.2	4 4.1	0 .0	4 4.1	0 .0	1 1.0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	47 48.5%	50 51.5%	97
5 .7	11 16.9	1 1.5	11 16.9	2 3.1	9 13.8	2 3.1	3 4.6	1 1.5	2 3.1	1 1.5	1 1.5	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	52 80.0%	13 20.0%	65
0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --			
3 .6	0 .0	1 4.5	0 .0	5 22.7	1 4.5	5 22.7	0 .0	3 13.6	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	3 13.6%	19 86.4%	22
0 .0	15 21.1	0 .0	6 8.5	0 .0	7 9.9	0 .0	6 8.5	0 .0	1 1.4	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	71 100%	0	71
0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --			
0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --			
0 .0	20 30.3	0 .0	12 18.2	0 .0	13 19.7	0 .0	6 9.1	0 .0	3 4.5	0 .0	2 3.0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	66 100%		66
0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --			
0 .0	4 50.0	0 .0	2 25.0	1 12.5	0 .0	0 .0	1 12.5	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	7 87.5%	1 12.5%	8
0 .0	0 .0	1 20.0	0 .0	0 .0	1 20.0	1 20.0	1 20.0	0 .0	1 20.0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	3	2	5

THE FOLLOWING PAGES ARE MISNUMBERED.
THIS REPORT IS COMPLETE AS FIIMED.

Note: Courses included within each vocational instructional area are shown below:

Agriculture

- General agriculture
- Farm mechanics
- Nursery operation
- Horticulture

Graphic Arts

- Photography
- Printing
- Technical illustrating

Business and Office Education

- Accounting
- Bookkeeping
- Business correspondence
- Business law
- Business machines
- Business mathematics
- Clerical practices
- Data processing
- Distributive education
- Insurance
- Management supervision
- Office methods
- Purchasing
- Real estate
- Sales and retailing
- Secretarial training
- Shorthand
- Typing

Health Services

- Dental assisting
- Dental hygiene
- Inhalation therapy
- Medical assisting
- Nursing
- X-ray technology

Trade and Technical

- Apprentice, general
- Apprentice, auto mechanics
- Apprentice, carpentry
- Apprentice, construction
- Apprentice, ironworker
- Apprentice, machine shop

Trade and Technical (cont.)

- Auto mechanics
- Aviation technology
- Broadcasting
- Carpentry
- Construction practices
- Drafting, general
- Drafting, architectural
- Drafting, engineering
- Drafting, mechanical
- Drafting technology
- Electricity
- Electric wiring
- Electronics
- Electronics technology
- Engineering design
- Engineering technology
- Industrial supervision
- Landscape architecture
- Machine technology
- Machine tools
- Meat cutting
- Metals
- Optics
- Painting and decorating
- Plastics
- Plumbing
- Power mechanics
- Refrigeration
- Service station operation
- Surveying
- Welding
- Woodworking

Public and Personal Services

- Cosmetology
- Fire science
- Food service
- Law enforcement

Table C-3

TEACHING STATUS OF TEACHERS, BY AREA OF INSTRUCTION AND BY SCHOOL LEVEL

	Respondents									
	Permanent		Probationary		Substitute			Total		
Area of Instruction	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time	No Answer	Full Time	Part Time	Combined Total
	1,051 62.3%	129 7.6%	417 24.7%	79 4.7%	4 .2%	5 .3%	3 .2%	1,472 87.2%	213 12.6%	1,688
General education subjects										
High school	731 70.0%	23 2.2%	256 24.5%	30 2.9%	3 .3%	0 .0	1 .1%	990 94.8%	53 5.1%	1,044
Junior college	129 42.4%	44 14.5%	96 31.6%	29 9.5%	1 .3%	4 1.3%	1 .3%	226 74.3%	77 25.3%	304
Agriculture										
High school	3 50.0%	0 .0	3 50.0%	0 .0	0 .0	0 .0	0 .0	6 100%	0	6
Junior college	0 --	0 --	0 --	0 --	0 --	0 --	0 --			
Graphic arts										
High school	0 --	0 --	0 --	0 --	0 --	0 --	0 --			
Junior college	0 --	0 --	0 --	0 --	0 --	0 --	0 --			
Business and office education										
High school	71 73.2%	0 .0	24 24.7%	1 1.0%	0 .0	0 .0	1 1.0%	95 97.9%	1 1.0%	97
Junior college	26 40.0%	17 26.2%	12 18.5%	9 13.8%	0 .0	1 1.5%	0 .0	38 58.5%	27 41.5%	65
Health services										
High school	0 --	0 --	0 --	0 --	0 --	0 --	0 --			
Junior college	11 50.0%	5 22.7%	6 27.3%	0 .0	0 .0	0 .0	0 .0	17 77.3%	5 22.7%	22
Industrial arts										
High school	57 80.3%	0 .0	13 18.3%	1 1.4%	0 .0	0 .0	0 .0	70 98.6%	1 1.4%	71
Junior college	0 --	0 --	0 --	0 --	0 --	0 --	0 --			
Trade and technical										
High school	0 --	0 --	0 --	0 --	0 --	0 --	0 --			
Junior college	15 22.7%	37 56.1%	6 9.1%	8 12.1%	0 .0	0 .0	0 .0	21 31.8%	45 68.2%	66
Public/personal services										
High school	0 --	0 --	0 --	0 --	0 --	0 --	0 --			
Junior college	3 37.5%	3 37.5%	1 12.5%	1 12.5%	0 .0	0 .0	0 .0	4 50.0%	4 50.0%	8
No answer										
High school	5 100%	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	5 100%	0	5

Table C-4

LEVEL AT WHICH RESPONDENTS FIRST ENTERED TEACHING, BY PRESENT SCHOOL LEVEL AND PRIMARY AREA OF INSTRUCTION

Area of Instruction	Elementary	Secondary	Junior College	Business College	Trade Technical	Adult Education	Other	No Answer	Total
General education subjects									
High school	103 9.9%	892 85.4%	7 .7%	0 .0	0 .0	2 .2%	39 3.7%	1 .1%	1,044
Junior college	26 8.6%	145 47.7%	74 24.3%	0 .0	0 .0	2 .7%	56 18.4%	1 .3%	304
Agriculture									
High school	0 .0	6 100%	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	6
Junior college	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0
Graphic arts									
High school	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0
Junior college	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0
Business and office education									
High school	4 4.1%	90 92.8%	1 1.0%	2 2.1%	0 .0	0 .0	0 .0	0 .0	97
Junior college	2 3.1%	26 40.0%	23 35.4%	2 3.1%	2 3.1%	2 3.1%	8 12.3%	0 .0	65
Health services									
High school	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0
Junior college	0 .0	1 4.5%	12 54.5%	0 .0	3 13.6%	0 .0	6 27.3%	0 .0	22
Industrial arts									
High school	5 7.0%	63 88.7%	0 .0	0 .0	0 .0	1 1.4%	2 2.8%	0 .0	71
Junior college	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0
Trade and technical									
High school	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0
Junior college	0 .0	9 13.6%	35 53.0%	0 .0	7 10.6%	10 15.2%	5 7.6%	0 .0	66
Public/personal services									
High school	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0
Junior college	0 .0	0 .0	6 75.0%	0 .0	2 25.0%	0 .0	0 .0	0 .0	8
No answer									
High school	1 20.0%	3 60.0%	0 .0	0 .0	0 .0	0 .0	1 20.0%	0 .0	5
Junior college	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --	0 --

Table C-5

LOCATION OF INITIAL TEACHING ASSIGNMENT, BY PRESENT PRIMARY AREA OF INSTRUCTION AND SCHOOL LEVEL

	Respondents			
	General Education		Vocational/ Industrial Arts	
	High School	Junior College	High School	Junior College
	1,044 100%	304 100%	174 100%	161 100%
First Taught				
New England states	4 .4%	2 .7%	1 .6%	2 1.2%
Mid-Atlantic	19 1.8%	11 3.6%	1 .6%	6 3.7%
East North Central	47 4.5%	28 9.2%	5 2.9%	7 4.3%
West North Central	43 4.1%	9 3.0%	5 2.9%	4 2.5%
South Atlantic	6 .6%	6 2.0%	0 --	3 1.9%
East South Central	4 .4%	1 .3%	0 --	0 --
West South Central	12 1.1%	8 2.6%	3 1.7%	2 1.2%
Mountain	44 4.2%	18 5.9%	4 2.3%	4 2.5%
Pacific, excluding California	39 3.7%	10 3.3%	6 3.4%	2 1.2%
Santa Clara County	559 53.5%	102 33.6%	104 59.8%	104 64.6%
San Francisco-Oakland Area	67 6.4%	30 9.9%	13 7.5%	9 5.6%
Central Valley	61 5.8%	21 6.9%	8 4.6%	5 3.1%
Central Coast	30 2.9%	10 3.3%	8 4.6%	2 1.2%

Table C-5 (concluded)

First Taught	Respondents: General Education: High School	Respondents: General Education: Junior College	Respondents: Vocational/ Industrial Arts: High School	Respondents: Vocational/ Industrial Arts: Junior College
Other Northern California	45 4.3%	13 4.3%	12 6.9%	5 3.1%
Los Angeles area	36 3.4%	19 6.3%	3 1.7%	5 3.1%
San Diego area	6 .6%	2 .7%	0 --	0 --
Other Southern California	11 1.1%	8 2.6%	1 .6%	0 --
Foreign countries	9 .9%	6 2.0%	0 --	1 .6%
No answer	2 .2%	0 --	0 --	0 --

Note: States within division designations follow Bureau of Census grouping. Counties within California region designations are shown below:

San Francisco-Oakland Area

- Alameda
- Contra Costa
- Marin
- San Francisco
- San Mateo
- Solano

Central Valley

- Fresno
- Kings
- Madera
- Merced
- Sacramento
- San Joaquin
- Stanislaus
- Tulare

Central Coast

- Monterey
- Santa Cruz
- San Benito
- San Luis Obispo

Other Northern California

- Alpine
- Amador
- Butte
- Calaveras
- Colusa
- Del Norte
- El Dorado
- Glenn
- Humboldt
- Inyo
- Lake
- Lassen
- Mariposa
- Mendocino
- Modoc
- Mono
- Napa
- Nevada
- Placer
- Plumas

Other Northern California (cont.)

- Shasta
- Sierra
- Siskiyou
- Sutter
- Tehema
- Trinity
- Tuolumne
- Yolo
- Yuba

Los Angeles Area

- Los Angeles
- Orange
- Riverside
- San Bernardino
- Ventura

San Diego Area

- San Diego

Other Southern California

- Imperial
- Kern
- Santa Barbara

Table C-6

LOCATION OF SCHOOL PRIOR TO PRESENT TEACHING ASSIGNMENT BY PRESENT PRIMARY AREA OF INSTRUCTION AND SCHOOL LEVEL

	Respondents			
	General Education.		Vocational/ Industrial Arts	
	High School	Junior College	High School	Junior College
	1,044	304	174	161
	100%	100%	100%	100%
Location of Prior School				
New England states	1	2	0	1
	.1%	.7%	--	.6%
Mid-Atlantic	13	12	0	4
	1.2%	3.9%	--	2.5%
East North Central	22	12	3	4
	2.1%	3.9%	1.7%	2.5%
West North Central	15	5	4	0
	1.4%	1.6%	2.3%	--
South Atlantic	5	3	1	1
	.5%	1.0%	.6%	.6%
East South Central	1	0	0	0
	.1%	--	--	--
West South Central	6	3	1	2
	.6%	1.0%	.6%	1.2%
Mountain	29	18	2	2
	2.8%	5.9%	1.1%	1.2%
Pacific, excluding California	31	9	5	1
	3.0%	3.0%	2.9%	.6%
Santa Clara County	313	96	39	35
	30.0%	31.6%	22.4%	21.7%
San Francisco-Oakland	69	34	10	12
	6.6%	11.2%	5.7%	7.5%
Central Valley	38	12	5	6
	3.6%	3.9%	2.9%	3.7%
Central Coast	21	7	10	0
	2.0%	2.3%	5.7%	--

Table C-6 (concluded)

Location of Prior School	Respondents General Education High School	Respondents General Education Junior College	Respondents Vocational/ Industrial Arts High School	Respondents Vocational/ Industrial Arts Junior College
Other Northern California	30 2.9%	9 3.0%	10 5.7%	2 1.2%
Los Angeles area	31 3.0%	19 6.3%	4 2.3%	6 3.7%
San Diego area	6 .6%	2 .7%	0 --	0 --
Other Southern California	14 1.3%	2 .7%	2 1.1%	2 1.2%
Foreign countries	10 1.0%	1 .3%	1 .6%	1 .6%
Did not indicate	5 .5%	4 1.3%	3 1.7%	3 1.9%
Subtotal	660 63.2%	250 82.2%	100 57.5%	82 50.9%
Did not teach elsewhere	384 36.8%	54 17.8%	74 42.5%	79 49.1%

Table C-7

EDUCATIONAL ATTAINMENT OF RESPONDENT TEACHERS ON ENTRY TO TEACH BY PRESENT PRIMARY AREA OF INSTRUCTION/SCHOOL LEVEL

	Respondents											
	High School				College				Graduate			
	1	2	3	4	1	2	3	4	1	2	3	
	0	1	2	20	10	31	15	520	715	259	65	
		.1%	.1%	1.2%	.6%	1.8%	.9%	30.8%	42.4%	15.3%	3.8%	1
Area of Instruction												
General education subjects												
High school	-	--	--	--	4	8	4	303	516	154	29	
					.4%	.8%	.4%	29.0%	49.4%	14.7%	2.8%	
Junior college	-	--	--	1	--	2	4	82	103	74	25	
				.3%		.7%	1.3%	27.0%	33.9%	24.3%	8.2%	2
Agriculture												
High school	-	--	--	--	--	--	--	1	4	1	--	
								16.7%	66.7%	16.7%		
Junior college	-	--	--	--	--	--	--	--	--	--	--	
Business and office education												
High school	-	--	--	--	--	--	1	46	40	6	2	
							1.0%	47.4%	41.2%	6.2%	2.1%	
Junior college	-	--	--	1	--	--	1	22	20	10	6	
				1.5%			1.5%	33.8%	30.8%	15.4%	9.2%	4
Health services												
High school	-	--	--	--	--	--	--	--	--	--	--	
Junior college	-	--	--	3	--	5	1	7	4	1	1	
				13.6%		22.7%	4.5%	31.8%	18.2%	4.5%	4.5%	
Industrial arts												
High school	-	--	--	2	--	--	1	44	18	3	2	
				2.8%			1.4%	62.0%	25.4%	4.2%	2.8%	
Junior college	-	--	--	--	--	--	--	--	--	--	--	
Trade and Technical												
High school	-	--	--	--	--	--	--	--	--	--	--	
Junior college	-	1	2	12	6	13	3	13	8	6	--	
		1.5%	3.0%	18.2%	9.1%	19.7%	4.5%	19.7%	12.1%	9.1%		3
Public and personal services												
High school	-	--	--	--	--	--	--	--	--	--	--	
Junior college	-	--	--	1	--	2	--	--	2	2	--	
				12.5%		25.0%			25.0%	25.0%		12
No answer												
High school	-	--	--	--	--	1	--	2	--	2	--	
						20.0%		40.0%		40.0%		
Junior college	-	--	--	--	--	--	--	--	--	--	--	

Table C-7

CATIONAL ATTAINMENT OF RESPONDENT TEACHERS ON ENTRY TO TEACHING BY PRESENT PRIMARY AREA OF INSTRUCTION/SCHOOL LEVEL

Respondents																
igh School			College				Graduate							No An- swer	Com- bined Total
	3	4	1	2	3	4	1	2	3	4	5	6	Total		
%	2 .1%	20 1.2%	10 .6%	31 1.8%	15 .9%	520 30.8%	715 42.4%	259 15.3%	65 3.8%	18 1.1%	7 .4%	3 .2%	1,666 98.7%	22 1.3%	1,688
-	--	--	4 .4%	8 .8%	4 .4%	303 29.0%	516 49.4%	154 14.7%	29 2.8%	4 .4%	6 .6%	2 .2%	1,030 98.7%	14 1.3%	1,044
-	--	1 .3%	--	2 .7%	4 1.3%	82 27.0%	103 33.9%	74 24.3%	25 8.2%	8 2.6%	--	1 .3%	300 98.7%	4 1.3%	304
-	--	--	--	--	--	1 16.7%	4 66.7%	1 16.7%	--	--	--	--	6 100 %	--	6
-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
-	--	--	--	--	1 1.0%	46 47.4%	40 41.2%	6 6.2%	2 2.1%	--	--	--	95 97.9%	2 2.1%	97
-	--	1 1.5%	--	--	1 1.5%	22 33.8%	20 30.8%	10 15.4%	6 9.2%	3 4.6%	1 1.5%	--	64 98.5%	1 1.5%	65
-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
-	--	3 13.6%	--	5 22.7%	1 4.5%	7 31.8%	4 18.2%	1 4.5%	1 4.5%	--	--	--	22 100%	--	22
-	--	2 2.8%	--	--	1 1.4%	44 62.0%	18 25.4%	3 4.2%	2 2.8%	--	--	--	70 98.6%	1 1.4%	71
-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1 5%	2 3.0%	12 18.2%	6 9.1%	13 19.7%	3 4.5%	13 19.7%	8 12.1%	6 9.1%	--	2 3.0%	--	--	66 100%	--	66
-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
-	--	1 12.5%	--	2 25.0%	--	--	2 25.0%	2 25.0%	--	1 12.5%	--	--	8 100%	--	8
-	--	--	--	1 20.0%	--	2 40.0%	--	2 40.0%	--	--	--	--	5 100%	--	5
-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table C-8

RESPONDENT TEACHERS REPORTING ADDITIONAL CREDIT HOURS OF STUDY SINCE ENTERING TEACHING AND RELATION OF ADDITIONAL STUDY TO PRESENT PRIMARY AREA OF INSTRUCTION

General Education Subjects Instructors

Proportion of Study Related to Present Primary Area of Instruction	Semester Credit Hours of Study Since Entering Teaching							
	None	1-15	16-30	31-45	46-60	Over 60	No Answer	Total
None	114	35	20	9	5	8	--	191
Less than 1/4	--	11	39	27	16	25	--	118
Between 1/4 and 1/2	--	18	32	28	33	56	--	167
Over 1/2	--	36	68	87	70	191	--	452
All	--	145	79	76	38	62	--	400
No answer	--	--	--	--	2	5	13	20
Total	114	245	238	227	164	347	13	1,348

Table C-9

RESPONDENT TEACHERS REPORTING ADDITIONAL CREDIT HOURS OF STUDY SINCE ENTERING TEACHING AND RELATION OF ADDITIONAL STUDY TO PRESENT PRIMARY AREA OF INSTRUCTION

Industrial Arts and Vocational Subjects Instructors

Proportion of Study Related to Present Primary Area of Instruction	Semester Credit Hours of Study Since Entering Teaching							
	None	1-15	16-30	31-45	46-60	Over 60	No Answer	Total
None	43	15	6	6	1	1	-	72
Less than 1/4	--	4	7	6	7	6	-	30
Between 1/4 and 1/2	--	2	6	10	12	12	-	42
Over 1/2	--	6	18	25	19	28	-	96
All	--	47	14	12	6	11	-	90
No answer	--	--	--	--	--	--	5	5
Total	43	74	51	59	45	58	5	335

Table C-10

HIGHEST DEGREE HELD BY RESPONDENT TEACHERS, BY PRESENT PRIMARY AREA OF INSTRUCTION AND SCHOOL LEVEL

Area of Instruction	Respondents						
	No Degree	Certificate	Associate	Bachelor	Master	Doctor	LLB
	34 2.0%	6 .4%	6 .4%	678 40.2%	915 54.2%	30 1.8%	5 .3%
General education subjects							
High school	--	--	--	540 51.7%	490 46.9%	4 .4%	--
Junior college	--	--	--	17 5.6%	266 87.5%	19 6.3%	1 .3%
Agriculture							
High school	--	--	--	2 33.3%	4 66.7%	--	--
Junior college	--	--	--	--	--	--	--
Business and office education							
High school	--	--	--	59 60.8%	37 38.1%	--	--
Junior college	1 1.5%	--	--	10 15.4%	47 72.3%	3 4.6%	3 4.6%
Health services							
High school	--	--	--	--	--	--	--
Junior college	7 31.8%	1 4.5%	1 4.5%	1 4.5%	12 54.5%	--	--
Industrial arts							
High school	1 1.4%	--	--	34 47.9%	36 50.7%	--	--
Junior college	--	--	--	--	--	--	--
Trade and technical							
High school	--	--	--	--	--	--	--
Junior college	24 36.4%	3 4.5%	5 7.6%	11 16.7%	20 30.3%	2 3.0%	--
Public and personal services							
High school	--	--	--	--	--	--	--
Junior college	1 12.5%	2 25.0%	--	2 25.0%	2 25.0%	--	1 12.5%
No answer							
High school	--	--	--	2 40.0%	1 20.0%	2 40.0%	--
Junior college	--	--	--	--	--	--	--

Table C-10

T DEGREE HELD BY RESPONDENT TEACHERS, BY PRESENT PRIMARY AREA OF INSTRUCTION AND SCHOOL LEVEL

			Respondents						
ree	Certificate	Associate	Bachelor	Master	Doctor	LLB	Other	No Answer	Total
%	6 .4%	6 .4%	678 40.2%	915 54.2%	30 1.8%	5 .3%	2 .1%	12 .7%	1,688 100%
	--	--	540 51.7%	490 46.9%	4 .4%	--	1 .1%	9 .9%	1,044
	--	--	17 5.6%	266 87.5%	19 6.3%	1 .3%	--	1 .3%	304
	--	--	2 33.3%	4 66.7%	--	--	--	--	6
	--	--	--	--	--	--	--	--	--
	--	--	59 60.8%	37 38.1%	--	--	--	1 1.0%	97
%	--	--	10 15.4%	47 72.3%	3 4.6%	3 4.6%	--	1 1.5%	65
	--	--	--	--	--	--	--	--	--
%	1 4.5%	1 4.5%	1 4.5%	12 54.5%	--	--	--	--	22
%	--	--	34 47.9%	36 50.7%	--	--	--	--	71
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
%	3 4.5%	5 7.6%	11 16.7%	20 30.3%	2 3.0%	--	1 1.5%	--	66
	--	--	--	--	--	--	--	--	--
%	2 25.0%	--	2 25.0%	2 25.0%	--	1 12.5%	--	--	8
	--	--	2 40.0%	1 20.0%	2 40.0%	--	--	--	5
	--	--	--	--	--	--	--	--	--

Table C-11

TOTAL YEARS TEACHING EXPERIENCE, BY YEA
PRESENT PRIMARY AREA OF INSTRUCTION A
General Education Subjec

	Respondents								
	0-4 Years		5-9 Years		10-14 Years		15-19 Years		20-24 Ye
Total Years in Teaching	High School	Junior College	High School	Junior College	High School	Junior College	High School	Junior College	High School
	454 33.7%	111 8.2%	307 22.8%	96 7.1%	123 9.1%	55 4.1%	63 4.7%	19 1.4%	23 1.7%
0-4	379 82.4%	71 15.4%							
5-9	58 13.7%	24 5.7%	252 59.4%	74 17.5%					
10-14	13 5.9%	12 5.5%	31 14.2%	15 6.8%	92 42.0%	41 18.7%			
15-19	3 2.1%	3 2.1%	17 11.7%	5 3.4%	22 15.2%	9 6.2%	57 39.3%	18 12.4%	
20-24	1 1.9%	1 1.9%	3 5.7%	1 1.9%	5 9.4%	2 3.8%	3 5.7%	0	22 41.5%
25-29			1 4.0%	0	2 8.0%	1 4.0%	3 12.0%	1 4.0%	0
30+			3 16.7%	0	1 5.6%	0	0	0	1 5.6%
No answer			0	1	1	2			

Table C-11

NG EXPERIENCE, BY YEARS OF TEACHING IN
AREA OF INSTRUCTION AND SCHOOL LEVEL
eral Education Subjects

ondents

Years	20-24 Years		25-29 Years		30+ Years		Total			
Junior College	High School	Junior College	High School	Junior College	High School	Junior College	High School	Junior College	No Answer	Combined Total
19 1.4%	23 1.7%	7 .5%	10 .7%	8 .6%	4 .3%	1 .1%	984 73.0%	297 22.0%	67 5.0%	1,348
							379 82.4%	71 15.4%	10 2.2%	460
							310 73.1%	98 23.1%	16 3.8%	424
							136 62.1%	68 31.1%	15 6.8%	219
18 12.4%							99 68.3%	35 24.1%	11 7.6%	145
0	22 41.5%	7 13.2%					34 64.2%	11 20.7%	8 15.1%	53
1 4.0%	0	0	7 28.0%	5 20.0%			13 52.0%	7 28.0%	5 20.0%	25
0	1 5.6%	0	3 16.7%	3 16.7%	4 22.2%	1 5.6%	12 66.7%	4 22.2%	2 11.1%	18
							1	3	0	4

Table C-12

TOTAL YEARS OF TEACHING EXPERIENCE, BY Y
PRESENT PRIMARY AREA OF INSTRUCTION A
Agriculture

	Respondents									
	0-4 Years		5-9 Years		10-14 Years		15-19 Years		20-24 Ye	
Total Years in Teaching	High School	Junior College	High School	Junior College	High School	Junior College	High School	Junior College	High School	Ju Co
	1 16.7%	0	2 33.3%	0	2 33.3%	0	1 16.7%	0	-	
0-4	1 100%	0 -								
5-9			2 100%	0 -						
10-14					2 100%	0 -				
15-19							1 100%	0 -		
20-24										
25-29										
30+										
No answer										

Table C-12

ING EXPERIENCE, BY YEARS OF TEACHING IN
REA OF INSTRUCTION AND SCHOOL LEVEL
Agriculture

ondents

Years	20-24 Years		25-29 Years		30+ Years		Total			
Junior College	High School	Junior College	High School	Junior College	High School	Junior College	High School	Junior College	No Answer	Combined Total
0	-	-	-	-	-	-	6 100%	0	0	6
							1 100%	0	0	1
							2 100%	0	0	2
							2 100%	0	0	2
0 -							1 100%	0	0	1
							--	-	-	-
							--	-	-	-
							--	-	-	-
							--	-	-	-

Table C-13

TOTAL YEARS OF TEACHING EXPERIENCE, BY Y
PRESENT PRIMARY AREA OF INSTRUCTION A
Business and Office Educa

	Respondents									
	0-4 Years		5-9 Years		10-14 Years		15-19 Years		20-24 Ye	
Total Years in Teaching	High School	Junior College	High School	Junior College	High School	Junior College	High School	Junior College	High School	Ju Co
	43 26.5%	29 17.9%	32 19.8%	19 11.7%	10 6.2%	10 6.2%	8 4.9%	6 3.7%	1 .6%	
0-4	40 62.5%	24 37.5%								
5-9	3 5.7	3 5.7%	30 56.6%	16 30.2%						
10-14			1 5.3%	2 10.5%	7 36.8%	9 47.4%				
15-19			0 --	1 5.6%	3 16.7%	1 5.6%	7 38.9%	6 33.3%		
20-24							1 100%	0 --		
25-29									1 33.3%	
30+										
No answer	0	1	1	0						

Table C-13

ING EXPERIENCE, BY YEARS OF TEACHING IN
REA OF INSTRUCTION AND SCHOOL LEVEL
ess and Office Education

ndents

Years	20-24 Years		25-29 Years		30+ Years		Total			
Junior College	High School	Junior College	High School	Junior College	High School	Junior College	High School	Junior College	No Answer	Combined Total
6 3.7%	1 .6%	0 -	2 1.2%	0 -	0 -	1 .6%	96 59.3%	65 40.1%	1 .6%	162
							40 62.5%	24 37.5%	0	64
							33 62.3%	19 35.8%	1 1.9%	53
							8 42.1%	11 57.9%	0	19
6 33.3%							10 55.6%	8 44.4%	0	18
0 --							1 100%	0	0	1
	1 33.3%	0 -	2 66.7%	0 -			3 100%	0	0	3
					0	1 100%	0	1 100%	0	1
							1	1	0	2

Table C-14

TOTAL YEARS OF TEACHING EXPERIENCE, BY Y
PRESENT PRIMARY AREA OF INSTRUCTION A
Health Services Subject

Total Years in Teaching	Respondents									
	0-4 Years		5-9 Years		10-14 Years		15-19 Years		20-24 Ye	
	High School	Junior College	High School	Junior College	High School	Junior College	High School	Junior College	High School	Ju Co
	0 -	9 40.9%	0	7 31.8%	0	4 18.2%	0	1 4.5%	0	
0-4	0	8 100%								
5-9	0	1 14.3%	0	6 85.7%						
10-14			0	1 20%	0	4 80%				
15-19							0	1 100%		
20-24									0	
25-29										
30+										
No answer										

Table C-14

HING EXPERIENCE, BY YEARS OF TEACHING IN
AREA OF INSTRUCTION AND SCHOOL LEVEL
alth Services Subjects

pondents										
9 Years	20-24 Years		25-29 Years		30+ Years		Total			
Junior College	High School	Junior College	High School	Junior College	High School	Junior College	High School	Junior College	No Answer	Combined Total
1 4.5%	0	1 4.5%	-	-	-	-	0	22 100%	0	22
							0	8 100%	0	8
							0	7 100%	0	7
							0	5 100%	0	5
1 100%							0	1 100%	0	1
	0	1 100%					0	1 100%	0	1
							0	0	0	0
							0	0	0	0

Table C-15

TOTAL YEARS OF TEACHING EXPERIENCE, BY Y
PRESENT PRIMARY AREA OF INSTRUCTION A
Industrial Arts

	Respondents									
	0-4 Years		5-9 Years		10-14 Years		15-19 Years		20-24 Ye	
Total Years in Teaching	High School	Junior College	High School	Junior College	High School	Junior College	High School	Junior College	High School	Ju Co
	24 33.8%	0	24 33.8%	0	12 16.9%	0	5 7.0%	0	3 4.2%	
0-4	22 100%	0								
5-9	2 8.0%	0	23 92.0%	0						
10-14			1 9.1%	0	10 90.9%	0				
15-19					2 25.0%	0	5 62.5%	0		
20-24									3 100%	
25-29										
30+										
No answer										

Table C-15

ING EXPERIENCE, BY YEARS OF TEACHING IN
REA OF INSTRUCTION AND SCHOOL LEVEL
Industrial Arts

ndents

Years	20-24 Years		25-29 Years		30+ Years		Total			
Junior College	High School	Junior College	High School	Junior College	High School	Junior College	High School	Junior College	No Answer	Combined Total
0	3 4.2%	0	-	-	2 2.8%	0	70 98.6%	0 -	1 1.4%	71
							22 100%	0	0	22
							25 100%	0	0	25
							11 100%	0	0	11
0							7 87.5%	0	1 12.5%	8
	3 100%	0					3 100%	0	0	3
							--	-	--	--
					2 100%	0	2 100%	0	0	2
							--	-	--	--

Table C-16

TOTAL YEARS OF TEACHING EXPERIENCE, BY Y
PRESENT PRIMARY AREA OF INSTRUCTION A
Trade and Technical Subje

	Respondents									
	0-4 Years		5-9 Years		10-14 Years		15-19 Years		20-24 Yea	
Total Years in Teaching	High School	Junior College	High School	Junior College	High School	Junior College	High School	Junior College	High School	Jur Col
	0 -	32 48.5%	0 -	17 25.8%	0 -	13 19.7%	0 -	3 4.5%	-	
0-4	0	29 100%								
5-9	0	1 7.1%	0	12 85.7%						
10-14			0	3 21.4%	0	11 78.6%				
15-19			0	2 50.0%	-	--	0	2 50.0%		
20-24					0	2 100%				
25-29										
30+	0	1 50.0%	-	--	-	--	0	1 50.0%		
No answer	0	1								

Table C-16

HING EXPERIENCE, BY YEARS OF TEACHING IN
AREA OF INSTRUCTION AND SCHOOL LEVEL
e and Technical Subjects

ondents										
9 Years	20-24 Years		25-29 Years		30+ Years		Total			
Junior College	High School	Junior College	High School	Junior College	High School	Junior College	High School	Junior College	No Answer	Combined Total
3 4.5%	-	-	-	-	-	-	0 -	65 98.5%	1 1.5%	66
							0	29 100%	0	29
							0	13 92.9%	1 7.1%	14
							0	14 100%	0	14
2 50.0%							0	4 100%	0	4
							0	2 100%	0	2
							-	--	--	--
1 50.0%							0	2 100%	0	2
							0	1	0	1

Table C-17

TOTAL YEARS OF TEACHING EXPERIENCE BY YE
PRESENT PRIMARY AREA OF INSTRUCTION A
Public and Personal Services

	Respondents									
	0-4 Years		5-9 Years		10-14 Years		15-19 Years		20-24 Ye	
Total Years in Teaching	High School	Junior College	High School	Junior College	High School	Junior College	High School	Junior College	High School	Ju Co
	0 -	7 87.5%	0 -	1 12.5%	-	-	-	-	-	
0-4	0	7 100%								
5-9			0	1 100%						
10-14										
15-19										
20-24										
25-29										
30+										
No answer										

Table C-17

CHING EXPERIENCE BY YEARS OF TEACHING IN
AREA OF INSTRUCTION AND SCHOOL LEVEL
nd Personal Services Subjects

ondents

9 Years	20-24 Years		25-29 Years		30+ Years		Total			
Junior College	High School	Junior College	High School	Junior College	High School	Junior College	High School	Junior College	No Answer	Combined Total
-	-	-	-	-	-	-	0	8 100%	0	8
							0	7 100%	0	7
							0	1 100%	0	1
							-	--	-	-
							-	--	-	-
							-	--	-	-
							-	--	-	-
							-	--	-	-
							-	--	-	-

SECTION 1

Table C-18

RELATION BETWEEN PRIMARY AND SECOND AREAS OF INSTRUCTION FOR RESPONDENTS REPORTING INSTRUCTION ASSIGNMENTS IN TWO TEACHING FIE

Second Area of Instruction

Primary Area	General Education	Agriculture	Graphic Arts	Business Education	Health	Industrial Arts	Tra Tec
General education subjects							
High school	181	0	0	10	0	2	
Junior college	34	0	0	2	0	0	
Agriculture							
High school	0	0	0	0	0	0	
Junior college	0	0	0	0	0	0	
Graphic arts							
High school	0	0	0	0	0	0	
Junior college	0	0	0	0	0	0	
Business and office education							
High school	8	0	0	0	0	1	
Junior college	1	0	0	0	0	0	
Health services							
High school	0	0	0	0	0	0	
Junior college	0	0	0	0	0	0	
Industrial arts							
High school	7	0	0	0	0	0	
Junior college	0	0	0	0	0	0	
Trade and technical							
High school	0	0	0	0	0	0	
Junior college	5	0	1	0	0	0	
Public/personal service							
High school	0	0	0	0	0	0	
Junior college	0	0	0	0	0	0	
No answer							
High school	0	0	0	0	0	0	
Junior college	0	0	0	0	0	0	
Total excluding no answer							
High school	196	0	0	10	0	3	
Junior college	40	0	1	2	0	0	
	236	0	1	12	0	3	

Table C-18

ATION BETWEEN PRIMARY AND SECOND AREAS OF INSTRUCTION FOR
NTS REPORTING INSTRUCTION ASSIGNMENTS IN TWO TEACHING FIELDS
Second Area of Instruction

n	Agriculture	Graphic Arts	Business Education	Health	Industrial Arts	Trade and Technical	Public/ Personal Services	No Answer	Total
	0	0	10	0	2	1	0	0	194
	0	0	2	0	0	0	0	0	36
	0	0	0	0	0	0	0	0	--
	0	0	0	0	0	0	0	0	--
	0	0	0	0	0	0	0	0	--
	0	0	0	0	0	0	0	0	--
	0	0	0	0	1	0	0	0	9
	0	0	0	0	0	0	0	0	1
	0	0	0	0	0	0	0	0	--
	0	0	0	0	0	0	0	0	--
	0	0	0	0	0	0	0	0	7
	0	0	0	0	0	0	0	0	--
	0	0	0	0	0	0	0	0	--
	0	1	0	0	0	1	0	0	7
	0	0	0	0	0	0	0	0	--
	0	0	0	0	0	0	0	0	--
	0	0	0	0	0	0	0	0	--
	0	0	0	0	0	0	0	0	--
	0	0	10	0	3	1	0	0	210
	0	1	2	0	0	1	0	0	44
	0	1	12	0	3	2	0	0	254

Table C-19

NUMBER OF RESPONDENT TEACHERS HOLDI
PRESENT PRIMARY AREA OF INSTRUC

	General Education		Agriculture		Business and Office		Health Serv	
Type of Credential	High School	Junior College	High School	Junior College	High School	Junior College	High School	Juni Coll
	1,044	304	6	0	97	65	0	2
General elementary	45	15	--	-	1	2	-	-
Junior high school	33	6	--	-	3	1	-	-
General secondary	850	176	4	-	74	33	-	
General secondary provisional	18	--	--	-	1	--	-	-
Special secondary	177	29	3	-	43	15	-	
Standard secondary	73	1	1	-	4	--	-	-
Junior college	20	104	--	-	2	10	-	
Junior college personnel	--	9	--	-	--	--	-	-
Standard junior college	--	13	--	-	--	3	-	-
Elementary administration	2	--	--	-	--	--	-	-
Secondary administration	39	14	1	-	4	5	-	-
General administration	11	6	--	-	--	1	-	-
Other administration	3	1	--	-	--	--	-	2
Vocational - A	--	1	--	-	--	--	-	
Vocational - D	--	2	--	-	--	--	-	-
Other vocational	6	--	3	-	2	4	-	
Designated subjects	5	3	--	-	--	12	-	
Pupil personnel	78	32	--	-	7	--	-	-
Special education	17	1	--	-	--	--	-	-
Standard supervision	3	--	--	-	--	--	-	-
Junior college supervision	--	1	--	-	--	--	-	2
Other miscellaneous	19	12	--	-	1	4	-	-
Total credentials	1,399	426	12	-	142	90	-	2

ble C-19

RS HOLDING EACH TYPE CREDENTIAL BY
INSTRUCTION AND SCHOOL LEVEL

Respondents

lth Service		Industrial Arts		Trade and Technical		Public and Personal Services		Did Not Answer		Total	
h ol	Junior College	High School	Junior College	High School	Junior College	High School	Junior College	High School	Junior College	High School	Junior College
	22	71	0	0	66	0	8	5	0	1,223	465
	--	3	-	-	--	-	--	1	-	50	17
	--	5	-	-	--	-	--	--	-	41	7
	1	48	-	-	6	-	--	5	-	981	216
	--	--	-	-	--	-	--	--	-	19	--
	8	58	-	-	6	-	--	--	-	281	58
	--	1	-	-	--	-	--	--	-	79	1
	3	3	-	-	2	-	--	--	-	25	119
	--	--	-	-	--	-	--	--	-	--	9
	--	--	-	-	1	-	--	--	-	--	17
	--	1	-	-	--	-	--	--	-	3	--
	--	2	-	-	--	-	--	2	-	48	19
	--	1	-	-	--	-	--	--	-	12	7
	--	--	-	-	--	-	--	--	-	3	1
	3	--	-	-	8	-	4	--	-	--	16
	--	--	-	-	23	-	2	--	-	--	27
	1	2	-	-	12	-	2	--	-	13	19
	7	3	-	-	19	-	2	--	-	8	43
	--	1	-	-	1	-	--	--	-	86	33
	--	--	-	-	--	-	--	--	-	17	1
	--	--	-	-	2	-	--	--	-	3	2
	--	--	-	-	--	-	--	--	-	--	1
	1	1	-	-	--	-	--	--	-	21	17
	24	129	-	-	80	-	10	8	-	1,690	630

Table C-20

RESPONDENT TEACHERS REPORTING OUTSIDE EMPLOYMENT EXPERIENCE WITHIN PAST TEN YEARS, BY PRIMARY AREA OF INSTRUCTION AND SCHOOL LEVEL

	Employed in Other than Teaching or Education Since 1955						Total		
Area of Instruction	Yes-M	Yes-F	No-M	No-F	No Answer-M	No Answer-F	Yes	No	No Answer
	889 100%	362 100%	204 100%	212 100%	5 100%	16 100%	1,251	416	21
General education subjects									
High school	490 55.1%	260 71.8%	127 62.3%	149 70.3%	3 60.0%	15 93.7%	750	276	18
Junior college	171 19.2%	41 11.3%	52 25.5%	40 18.9%	0 .0	0 .0	212	92	--
Agriculture									
High school	3 .3%	0 .0	3 1.5%	0 .0	0 .0	0 .0	3	3	--
Junior college	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	--	--	--
Graphic arts									
High school	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	--	--	--
Junior college	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	--	--	--
Business and office education									
High school	42 4.7%	34 9.4%	5 2.5%	16 7.5%	0 .0	0 .0	76	21	--
Junior college	47 5.3%	11 3.0%	5 2.5%	2 .9%	0 .0	0 .0	58	7	--
Health services									
High school	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	--	--	--
Junior college	3 .3%	15 4.1%	0 .0	3 1.4%	0 .0	1 6.2%	18	3	1
Industrial arts									
High school	63 7.1%	0 .0	8 3.9%	0 .0	0 .0	0 .0	63	8	--
Junior college	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	--	--	--
Trade and technical									
High school	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	--	--	--
Junior college	63 7.1%	0 .0	2 1.0%	0 .0	1 20.0%	0 .0	63	2	1
Public/personal services									
High school	0 .0	0 .0	0 .0	0 .0	0 .0	0 .0	--	--	--
Junior college	7 .8%	1 .3%	0 .0	0 .0	0 .0	0 .0	8	--	--
No answer									
High school	0 .0	0 .0	2 1.0%	2 .9%	1 20.0%	0 .0	--	4	1

Table C-21

RESPONDENT TEACHERS REPORTING OUTSIDE EMPLOYMENT WITHIN PAST TEN YEARS, BY TYPE OF EMPLOYMENT, PRESENT AREA OF INSTRUCTION, AND SCHOOL LEVEL

	Area of Employment				
Area of Instruction	Agriculture	Business and Sales	Office and Clerical	Professional and Technical	Trade and Industrial
General education subjects					
High school	24	211	175	85	102
Junior college	7	42	23	71	33
Agriculture					
High school	1	--	--	--	1
Junior college	--	--	--	--	--
Business and office					
High school	1	32	37	2	6
Junior college	--	31	15	11	--
Health services					
High school	--	--	--	--	--
Junior college	--	--	1	--	--
Industrial arts					
High school	3	9	--	7	40
Junior college	--	--	--	--	--
Trade and technical					
High school	--	--	--	--	--
Junior college	--	5	--	38	26
Public and personal services					
High school	--	--	--	--	--
Junior college	--	1	1	1	2
Subtotal					
High school	29	252	212	94	149
Junior college	7	79	40	121	61
Total	36	331	252	215	210

Table C-21

RESPONDENT TEACHERS REPORTING OUTSIDE EMPLOYMENT WITHIN PAST TEN YEARS, BY TYPE OF EMPLOYMENT, PRESENT AREA OF INSTRUCTION, AND SCHOOL LEVEL

Area of Employment								
culture	Business and Sales	Office and Clerical	Professional and Technical	Trade and Industrial	Health Services	Military Service	Other	Total
24	211	175	85	102	20	95	286	998
7	42	23	71	33	7	21	69	273
1	--	--	--	1	--	1	2	5
--	--	--	--	--	--	--	--	--
1	32	37	2	6	1	4	17	100
--	31	15	11	--	--	9	6	72
--	--	--	--	--	--	--	--	--
--	--	1	--	--	18	1	--	20
3	9	--	7	40	--	10	18	87
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	5	--	38	26	--	7	3	79
--	--	--	--	--	--	--	--	--
--	1	1	1	2	--	--	5	10
29	252	212	94	149	21	110	323	1,190
7	79	40	121	61	25	38	83	454
36	331	252	215	210	46	148	406	1,644

Table C-22

NUMBER OF MONTHS EMPLOYED IN TYPE OF OUTSIDE EMPLOYMENT REPORTED, BY RESPONDENT TEACHERS

General Education Subjects Instructors

Number of Months Employed	Area of Outside Employment								
	Agriculture	Business and Sales	Office and Clerical	Professional and Technical	Trade and Industrial	Health Services	Military Services	Other	Total
1-5	11	66	37	26	43	4	15	101	303
6-12	12	72	64	42	43	7	34	106	380
13-24	3	47	35	31	23	6	35	59	239
25-36	2	24	23	13	6	1	10	27	106
37-48	--	10	11	7	2	2	7	6	45
49-60	--	7	4	5	5	1	2	5	29
Over 60	1	12	8	24	4	4	8	10	71
No answer	2	15	16	8	9	2	5	41	98
Total	31	253	198	156	135	27	116	355	1,271

Table C-23

NUMBER OF MONTHS EMPLOYED IN TYPE OF OUTSIDE EMPLOYMENT REPORTED, BY RESPONDENT TEACHERS

Agriculture Instructors

Number of Months Employed	Area of Outside Employment								
	Agriculture	Business and Sales	Office and Clerical	Professional and Technical	Trade and Industrial	Health Services	Military Services	Other	Total
1-5					1				1
6-12	1							1	2
13-24							1	1	2
25-36									
37-48									
49-60									
Over 60									
No answer									
Total	1				1		1	2	5

Table C-24

NUMBER OF MONTHS EMPLOYED IN TYPE OF OUTSIDE EMPLOYMENT REPORTED, BY RESPONDENT TEACHERS
Business and Office Education Instructors

Number of Months Employed	Area of Outside Employment								
	Agriculture	Business and Sales	Office and Clerical	Professional and Technical	Trade and Industrial	Health Services	Military Services	Other	Total
1-5	1	7	9	--	2	-	--	7	26
6-12	-	19	17	4	2	-	5	10	57
13-24	-	5	5	3	-	1	4	--	18
25-36	-	8	2	--	-	-	4	1	15
37-48	-	1	10	2	1	-	--	2	16
49-60	-	3	2	--	-	-	--	1	6
Over 60	-	16	6	4	1	-	--	1	28
No answer	-	4	1	--	-	-	--	1	6
Total	1	63	52	13	6	1	13	23	172

Table C-25

NUMBER OF MONTHS EMPLOYED IN TYPE OF OUTSIDE EMPLOYMENT REPORTED, BY RESPONDENT TEACHERS
Health Services Subjects Instructors

Number of Months Employed	Area of Outside Employment								
	Agriculture	Business and Sales	Office and Clerical	Professional and Technical	Trade and Industrial	Health Services	Military Services	Other	Total
1-5			1			1			2
6-12						1			1
13-24						3	1		4
25-36						1			1
37-48						2			2
49-60						2			2
Over 60						8			8
No answer			—			—	—		—
Total			1			18	1		20

Table C-26

NUMBER OF MONTHS EMPLOYED IN TYPE OF OUTSIDE EMPLOYMENT REPORTED, BY RESPONDENT TEACHERS

Industrial Arts Instructors

Number of Months Employed	Area of Outside Employment								
	Agriculture	Business and Sales	Office and Clerical	Professional and Technical	Trade and Industrial	Health Services	Military Services	Other	Total
1-5	-	1	-	-	7	-	--	5	13
6-12	1	2	-	5	6	-	3	5	22
13-24	-	3	-	1	5	-	3	3	15
25-36	1	2	-	-	8	-	2	1	14
37-48	-	1	-	-	4	-	--	3	8
49-60	-	-	-	-	1	-	1	1	3
Over 60	-	-	-	-	4	-	--	--	4
No answer	1	-	-	1	5	-	1	--	8
Total	3	9	-	7	40	-	10	18	87

Table C-27

NUMBER OF MONTHS EMPLOYED IN TYPE OF OUTSIDE EMPLOYMENT REPORTED, BY RESPONDENT TEACHERS
Trade and Technical Subjects Instructors

Number of Months Employed	Area of Outside Employment								
	Agriculture	Business and Sales	Office and Clerical	Professional and Technical	Trade and Industrial	Health Services	Military Services	Other	Total
1-5	-	2	-	2	1	-	-	-	5
6-12	-	-	-	3	1	-	2	1	7
13-24	-	2	-	6	4	-	3	1	16
25-36	-	-	-	3	2	-	1	-	6
37-48	-	-	-	4	2	-	1	1	8
49-60	-	-	-	3	2	-	-	-	5
Over 60	-	1	-	17	13	-	-	-	31
No answer	-	-	-	--	1	-	-	-	1
Total	-	5	-	38	26	-	7	3	79

Table C-28

NUMBER OF MONTHS EMPLOYED IN TYPE OF OUTSIDE EMPLOYMENT REPORTED, BY RESPONDENT TEACHERS
Public and Personal Services Instructors

Number of Months Employed	Area of Outside Employment								
	Agriculture	Business and Sales	Office and Clerical	Professional and Technical	Trade and Industrial	Health Services	Military Services	Other	Total
1-5									
6-12									
13-24		1						1	2
25-36								1	1
37-48									
49-60									
Over 60			1	1	2			3	7
No answer	—	—	—	—	—	—	—	—	—
Total		1	1	1	2			5	10

Table C-29

NUMBER, AGE LEVEL, AND SEX OF PROPRIETARY SCHOOL TEACHERS, BY SCHOOL TYPE

	Age Level																					
	20-24		25-29		30-34		35-39		40-44		45-49		50-54		55-59		60-64		65-69		69+		Total	
Type of School	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Business and commercial	-	1	-	5	5	5	3	4	3	-	2	2	-	3					-	1			13	21
Health services											-	1	-	1			-	1					--	3
Real estate					1	-					1	-							1	1			3	1
Trade and technical	1	-	1	-	1	-	7	-	3	-	1	-	3	-			1	-					18	--
Miscellaneous	-	4	1	3	-	4	--	5			1	1	1	-	1	-					1	-	5	17
Total	1	5	2	8	7	9	10	9	6	-	5	4	4	4	1	-	1	1	1	2	1	-	39	42